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ARTICLE I.

THE DOCTORATE ADDRESS, Delivered at the Fortieth Annual Commencement Exercises of Rush Medical College, held in Central Music Hall, Chicago, February 20, 1883, by MOSES GUNN, M.D., LL.D., Professor of Surgery and Clinical Surgery, Rush Medical College.

GENTLEMEN OF THE GRADUATING CLASS:

As in nature, full fruition culminates a series of developmental changes which originated in the germ, so in education, the ceremonies of graduation typify that grade of development which enables the graduate to commence the enjoyment of the fruit of knowledge which he has thus far acquired. And as in nature the fruit contains the germ of future representatives of the family, which are to be an improvement upon or a degeneration from their predecessors, according to the management of the germ in its developmental progress, so in education, the acquired knowledge

of the graduate contains the germ which may perpetuate and increase human knowledge, or degenerate and die, according to the treatment which it shall receive.

You, gentlemen, have now gathered your first harvest from the medical tree, and while the fruit of that harvest may justly contribute to your delectation and profit in your future career, remember that it contains a rich supply of germs, some of which it behooves you to cultivate and improve.

It is the duty of every man to do good in his day and generation according to his ability; to leave his race, at least, unimpoverished by his existence. It is a privilege which may be enjoyed by every man of average health and intellect, to finally leave the world some better for his having lived in it. This general proposition applies to the grand body of human knowledge, as well as to the material wealth of the world.

The faithful propagation of a few or many of the germs contained in the fruit which you have thus far plucked will enable you to discharge the duty and enjoy the privilege which I have indicated. To do the first implies work, much work. Idleness will leave the balance in your account with the world against you, and rest assured that the world will torment you with frequent reminders of your indebtedness, though it fails to collect the debt.

To accomplish the second, you should be constant in your devotion to the science which you have chosen, using it as a means of doing good to the world at large, and to your profession in particular.

The germs which you find in your fruit must be carefully guarded against the mildew of forgetfulness on the one hand, and the scorching effects of sensual pursuits on the other, till you are in a situation to plant and cultivate them; and when that seed and cultivation time shall come—and it should begin even now—remember that your harvest will not be rich unless your husbandry shall have been thorough.

But though you neglect and waste the germs, you may not even selfishly enjoy your fruit without bestowing upon it an assiduous and protecting care. The fruit of the tree of knowledge which the student gathers is extremely perishable, unless it receives constant protection. Studious habits and thoughtful application

only will keep off the spores floating thickly in the atmosphere of idleness, which, settling down upon your store, develop the teeming bacterian myriads of decay and putrescence.

It grieves me somewhat that in falling into this figurative expression, in accordance with prevalent and fashionable modes of thought, I seemingly ignore the pure chemistry of decay; but I beg you to acquit me of any such dereliction, and to remember, as a standing caution, that all that is new is not always true, and that all that is true is not necessarily new.

But whatever simile may be employed, the marked and stern fact you must appreciate, that your stock of acquired knowledge will rapidly melt away without that reinforcement which comes of studious habits.

But it is not my intention to mar your enjoyment of this era in your lives by reiterating injunctions to labor. An occasion like this should, perhaps, be regarded as a breathing-time in the continuous work of professional life; a time to forget for a few days that you are laborers under an unrelenting taskmaster.

Let us turn, then, to the consideration of another subject of hardly less importance to the members of a learned profession. *Noblesse oblige*. Your rank and position impose upon you obligations which may not be avoided. The amenities of professional life and intercourse must be faithfully observed, and to observe them promptly and constantly you must be familiar with the principles upon which they are founded. Nay, more; those principles must become a part of your nature. To a certain extent, and in a limited number of men, they are innate. The man who is by nature a gentleman has an instinctive appreciation of them, and such a man will not often greatly err in his dealings with his professional brethren, individually or collectively. But the average man, however humiliating the confession may be, is not naturally a gentleman; and we cannot shut our eyes to the fact that many average men study medicine, practice medicine, and are widely useful to the public and the profession. Nature's noblemen are not very numerous, and those made by royal letters-patent only, are necessarily extremely defective. Royal letters are sometimes false labels. Men cannot be decreed nor legislated gentlemen. Education only can supplement natural deficiencies

in this, as in all other attributes. Hence, ethics justly demands your thoughtful attention, and should be thoroughly studied and consciously practiced, provided always, that it is practiced ethically. Perhaps the most unethical of all men is, generally speaking, he who is always ostentatiously ethical. His crime (for it is a crime) is that of scrupulously observing the letter, while violating the spirit of the law.

Principles of justice, tempered by kindness and graced by benevolence and beneficence, have been invoked for the regulation of professional conduct and intercourse, and thus has grown a body of law known and recognized as the code of medical ethics. This code may, like the body of common law, be unwritten, *i. e.*, it may have never been formally enacted by any law-making power, but its mandates are even more potent than a statute, for the statute may not venture to contravene the principles of common law. Like the English constitution, which is the bulwark of the sturdy Briton, it may never have been formally enacted by parliament, legislature or convention; yet, as the principles of the English constitution could gain no potency by such a process, so the principles of the code need not the force of an enactment. Thus, the medical profession in England (and, I believe, in every other European country) has no written code of ethics; and yet the principles which govern professional intercourse and deportment are as well known and as thoroughly potent as though the talismanic "Be it enacted by the British Medical Association" had attempted its supererogatory work.

Perhaps the earliest approach to a written code of medical ethics may be found in the Hippocratic oath. This oath was imposed by the physician upon his pupil at the time of his indenture, and made the pupil a sworn member of the corporation. It is as follows:

"I swear by Apollo the physician, and Æsculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation—to reckon him who taught me this art equally dear to me as my parents; to share my substance with him; to relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they

shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my art. I will not cut persons laboring under stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and further, from the seduction of females or males, of freemen and slaves. Whatever, in connection with my professional practice, or not in connection with it, I see or hear in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted me to enjoy life and the practice of the art, respected by all men, in all times! But should I trespass and violate this oath, may the reverse be my lot!"

It will be noticed, that while thus closely bound to one another, and to practice their art for the good of mankind and the protection of society, guided, in the main, by unselfish and generous motives, still, some of the requirements would hardly pass muster at the present time. It was a very close corporation, which sought to keep the art within certain families, hardly in harmony with the generous method and practice of making doctors in this year of grace which ushers you into the medical profession. Evidently, too, the departments of surgery and gynecology had not yet been recognized. Methinks those old masters, if their slumber is not too profound, must groan in spirit, if not in body, and their old crumbled bones metaphorically quake at the high-handed procedures of the last half of the nineteenth century. Even the

pure and unsanguinary physician of the present day must occasionally shock that holy dust, as he deals out the potentials of our *materia medica*.

Times have certainly changed! and times will continue to change. The principles of ethics, like the grand principle of the golden rule, will endure, but changed times may effect wonderful change in their application. Perhaps, centuries hence, nay, decades hence, some of the regulations of our code will seem as strange to the medical mind as do now some of the restrictions of the Hippocratic oath.

Our Federal Union of States has a written constitution, formally enacted. The individual States have each its formally adopted constitution. The medical profession in the United States has a code of ethics, formally enacted by the American Medical Association, which regulates professional legislation and conduct as potently as does the constitution of the United States the legislation of Congress. The State societies generally, and even local societies often, formally re enact and adopt this code for their own guidance. It therefore behooves the medical man to familiarize himself with this instrument. This is a duty which is as imperative as that which naturally rests upon every intelligent citizen to understand the principles of the Federal constitution.

The details of the code are arranged in three principal groups:

First. The duties of physicians to their patients, and the obligations of patients to their physicians.

Second. The duties of physicians to each other, and the profession at large.

Third. The duties of the profession to the public, and the obligations of the public to the profession.

Let me invite your attention to some of the subjects considered in this arrangement of articles and sections.

The first group consists of two articles.

Article I is composed of seven sections, treating of the duties of physicians to their patients, and is a comprehensive and sensible exposition, which you will do well to study and practice.

Article II consists of ten sections, devoted to a setting forth of the duties which patients owe to their physicians.

A code regulating the conduct of the members of a corporation

may be very properly enacted by that body ; but when its enactments contemplate the regulation of the conduct of other bodies, or of the general public, or of individuals outside of the corporation, it sounds very like a bull directed to that most erratic of all bodies, a comef. It may contain much wisdom and justice, but it is wholly inoperative, and falls little short of the ridiculous. Can it be that, through a process of unconscious cerebration, the framers of the code were emulating Don Quixote in their endeavor to regulate that which is notoriously not to be regulated? Contemplate the American Medical Association enacting that "Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms and causes of complaints peculiar to them;" that "a patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease;" that "patients should always, when practicable, send for their physician in the morning, before his usual hour of going out;" that "patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep;" that "a patient should, after his recovery, entertain a just and enduring sense of the services rendered him by his physician!" This is all very well and very true; but as well might they have enacted that all men ought to be sensible, considerate and just.

The conduct of patients relative to their maladies and medical attendant will be just what the joint peculiarities of physician and patient make it. It is a matter over which codes are utterly impotent. Imagine a doctor reading the riot act to the patient who persists in sending for him at unseemly hours! or to one who, having secured his services, fails properly to appreciate them! or to a shrinking, delicate female, who can't tell all the truth at once! Seriously, this article of the code is an excrescence, unsightly and ridiculous, which requires a surgeon's service, extirpation.

The second group, which relates exclusively to members of the profession, individually and collectively, consists of seven articles, containing twenty-nine sections which cover pretty completely the whole ground, and if you follow the letter and spirit of this portion of the code, you can never be far out of the way. I say

letter and spirit, for the designing and unscrupulous man may, in many ways, murder the spirit, while observing the letter of the code. Constitutions, and laws with their penalties, will not make all men good, nor make any man all good. The man is good or bad by virtue of his own attributes; not by virtue of laws and enactments. The good man uses the law for his guidance in cases of doubt; the bad one uses it to ascertain just how far he can wander within its limits, or to determine whether life has for him more attractions within or without the pale of the law. Doctors are no exception to the general rule. You will encounter many who know little of the code, but who, apparently, carry within their own consciousness the spirit and actuating force of all law. You will also come in contact with those who are familiar with all its articles and sections, whom you will learn not to trust.

The chief interest, at the present time, is found in Article IV of this group, which pertains to consultations, and that interest centers in the first section, which reads as follows:

"A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place where he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and the aids actually furnished by anatomy, physiology, pathology and organic chemistry."

Early in the summer of 1881 Lord Beaconsfield died, and during his last sickness, the question of a consultation between his irregular medical attendant and certain members of the regular profession became one of general interest to the English profession.

Just what the facts were, I may be excused from knowing, when, in reply to a letter of inquiry, one of the most prominent surgeons of London writes: "I cannot exactly say what were the facts, the really facts, in the case of Lord Beaconsfield, for many things supposed to be facts were only statements made in general conversation, and were probably not more nearly correct than such statements usually are." From this same letter, and from the English journals of that year, we know that the English profession became deeply interested in the question whether a regular physician could, with propriety, meet in consultation an irregular who stated that he had frequently treated his patients in accordance with the principles of regular medicine, and would thus continue to treat Lord Beaconsfield. The affairs of the International Medical Congress, however, submerged the question for a time, but at the meeting of the British Medical Association which followed immediately upon the adjournment of the congress, the presidential address, the address of the president of the medical section, and that of the president of the surgical section, all took up the question. Mr. Barrow, in the presidential address, took the ground that when the irregular practitioner had "consented to place himself under the direction of the consultant, no blame could be attached to the latter in responding to the invitation to take charge of the case."

Dr. Bristow, in his address on medicine, and Mr. Hutchinson, in his address on surgery, both favored consultations with certain irregulars.

Such opinions, from such sources, aroused correspondents and editors to active and earnest discussion, the general sentiment being against the position assumed by the authors of the three addresses. But the Lancashire and Cheshire branch of the association refused to affirm the "*lex non scripta*" of the profession covering the point in question.

The Royal College of Physicians in due time passed upon the subject in the following explicit and dignified language: "While the college has no desire to fetter the opinion of its members in reference to any theory they may see fit to adopt in connection with the practice of medicine, it nevertheless considers it desirable to express its opinion that the assumption or acceptance by mem-

bers of the profession, of designations implying the adoption of special modes of treatment, is opposed to those principles of freedom and dignity of the profession which should govern the relations of its members to each other and the public. The College, therefore, expects that all its fellows, members and licentiates will uphold those principles by discountenancing those who trade upon such designations."

In the meantime, professional thought in our own country was engaged in a consideration of the superfluously extended code of the American Medical Association. The State Society of New York had, at its annual meeting in February, 1881, appointed a committee to revise the code. The report of that committee was adopted at the annual meeting in February, 1882, and consisted in the presentation of what was practically a substitute for the code. The new code thus adopted wisely omits both the articles which attempt to regulate and determine the obligations of patients and the public to the profession, and correctly confines itself to its proper business, viz., the regulation of professional intercourse.

The chief feature of interest here, as in the code of the American Medical Association, is found in that section which specifies whom the members of the society may meet in consultation. It is as follows:

"Members of the Medical Society of the State of New York and of medical societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity."

Thus, that which was only proposed by the three distinguished men in Great Britain, is boldly adopted as a rule of action by the State Society of New York. The Empire State Society thus arrayed itself against the American Medical Association, and, as a natural consequence, its delegates were refused admission to that body at its annual meeting, held at St. Paul in June last.

Three weeks since, the Medical Society of the county of New York met for the purpose of securing an expression of opinion by its members relative to the new code of the State Society, and a resolution approving of the same was adopted by a more than two-thirds vote, viz., 147 to 60.

Since then the regular annual meeting of the State Society has taken place, during which the Society confirmed its action of the previous year.

This bit of history is instructive. It plainly shows that time and altered circumstances are continually changing the relations of men to one another, even in professional aspects.

The altered circumstances consist in the practical and often openly avowed abandonment of their dogmas on the part of the irregulars and an effort, conspicuously ludicrous it is true, to supplement their irregularities by a feeble show of science in their educational methods.

The State, too, lends its potent aid in changing relations. Uneasy gentlemen in the regular ranks clamor for a law which shall purge community of quackery of all forms and elevate the status of the profession by legal enactment. Thus, State boards are created, with sole power to license practitioners of medicine. In the accomplishment of this magnificent feat is illustrated in a forcible manner the truth of the old maxim that "politics make strange bed-fellows." The virtuous and enthusiastic regular, in his desire to purify community of quackery joins cordial hands with the most seductive of all forms of quackery, in order to secure a State licensing board composed of regulars and representatives of such forms of quackery as have numerical strength enough to make their aid desirable in this grand work of reformation. The old Æsculapian lion, graciously and benignantly inclining his august head, and the innocent (?) lambs of empty dogmatism, suspending for the nonce their amusing gambols, lie down together and are led by the monstrous child of folly and error.

Thus, the invocation of the State power accomplishes the legal parity and intimate association of the regular and irregular. Truly, a magnificent and pride-inspiring result!

Is it strange, then, that under these circumstances, in reference to the consultation question, men are coming forward with the proposition to throw down all restrictions and leave the individual practitioner to follow the dictates of his own judgment?

Contemplate, for a single moment, the present status of the medical profession in Illinois. Any member of the profession

who has not the good fortune to have been in practice in the State for ten years previous to the first of July, 1877, is obliged to obtain a license to practice from the State Licensing Board, which board is composed alike of regulars and irregulars, doctors of medicine and laymen.

Now, as to the ethics of this arrangement. Dr. A, a graduate of a respectable medical college, presents his diploma and asks for a license to practice his profession. The authority and reputation of the college are pronounced good, and he receives a document authorizing him to go forth with healing on his wings, signed, among others, by Drs. B. and C. irregulars. His first patient, perhaps, desires the counsel of Dr. B. or C. with whom, by virtue of the code, Dr. A. cannot consult, although his authority to practice is derived in part from these very men who have sat in solemn judgment over his own qualifications! Who would not be a member of a legally purified profession? Who would not court the happy lot of one who practices by grace of Drs. B. and C. and who is restrained by the code from meeting them upon a platform to which they have assisted in legally raising him? O, wise law! O, wise code! O, wise members of a learned profession who had not confidence enough in that profession to permit it to stand upon its own merits, but invoked the power of the State to accomplish this most ridiculous and humiliating result! Who would not be a member of the medical profession in Illinois, when to practice his calling he must have the endorsement of a mongrel body, or in event of his ten years' practice previous to 1877, enjoy his independence of that potential body in common with numerous "Lock Hospital" and "Lost manhood" quacks?

You, gentlemen, who contemplate practice in this State, will be compelled to recognize irregular medicine, inasmuch as you cannot legally write the first prescription, nor dress the first wound, without soliciting authority to do so from a body composed in part of avowed irregular practitioners. Old and eminent practitioners throughout the State, and several of your professors in Rush College, are independent of that body only by the operation of a proviso which legally places by their side some of the most notorious and ignorant quacks in the State. Thus the State

law *purifies* the profession by legalizing the most shameful quackery. Our only consolation is in the fact that no voluntary act of our own determines our legal status. This comfort, unfortunately, is denied you, for you are compelled to solicit and accept permission to practice from a mongrel board, and thus, by such enforced volition (if I may indulge in the paradox) you are obliged to recognize the legal professional status of men whom the code prohibits you from meeting at the bedside.

But the complications do not end here. The honorable gentlemen of the State Board who represent the regular profession are in frequent consultation with the irregular element of that board, over the qualifications of applicants for license; and I submit the question whether, in so doing, they are not violating the code as essentially as if they were consulting over the treatment of a patient? Nor is this all. The licensing power of the board is an *ex officio* power held by the State Board of Health, a body which meets, consults and acts in behalf of the general public health; which has communities for patients, and over these illustrious patients meets in formal and prolonged consultation; and I again submit the question of violation of the code; is not the degree of violation proportionate to the interests at stake?

If the regular members of the board were to meet in consultation at the bedside of an afflicted patient with the irregular members, they would undoubtedly violate the mandate of the code covering this subject; and when they meet in consultation over afflicted and pest-ridden communities, the principle remains unchanged; and if the National Association refuses admission to a delegate from the New York State Society, can it consistently admit a representative from the Illinois State Board of Health? The delegate from the New York State Society may have never personally violated the code, while the representative of the Illinois State Board of Health is a constant violator.

But I have not reached the climax of this ludicrous and colossal inconsistency. The National Board of Health has also its irregular element, and the distinguished and honorable gentlemen who represent regular medicine in that board are, consequently, in open violation of the code. It cannot be urged that there is no question of therapeutics involved; that the subject of public

hygiene offers no opportunity for clashing of fundamental principles. This question of therapeutics was waived in Lord Beaconsfield's case; but the Royal College decided that the offence lay in the professional recognition of men who trade on their qualifying designation; and the representatives of regular medicine in the National and Illinois Boards of Health are in constant professional recognition of men who thus trade on their designation.

It may, perhaps, be said that the association of these men on the board is not professional; that they are merely lay members, as is the case when other professions are represented. But this will not do; for in every instance, the irregular has been appointed to his position because he was an irregular, and represented his peculiar class. Had he not been an irregular he would never have received the appointment, but would have been set aside for some one who could represent the class to which he belonged.

Having now indicated the position which the representatives of regular medicine occupy on these boards, I desire to disclaim any intention or disposition, even, to arraign them for any violation whatever. On the contrary, I repose the fullest confidence in their professional honor and uprightness. I have no fear that they will become contaminated, nor that the medical profession will suffer in any way from their relations to their irregular associates.

But I do arraign the medical profession for gross inconsistency. The professional sentiment which overlooks the position of these representatives of regular medicine in the various boards of health where irregular medicine is also represented, and disciplines a society which adopts the rule that its members may consult with "legally qualified practitioners of medicine" and that "emergencies may occur in which all restrictions should, in the judgment of the practitioner yield to the demands of humanity," is inconsistent.

State power has intervened in each instance, and because the State has placed certain men in a board of health certain other men deem themselves justified in associating professionally with them. The State, also, through this same board, examines certain other men and gives them power to practice medicine. Now, if the State seal is curative in the one instance it is equally so in

the other. If the legally qualified irregular may be consulted with in the State and national boards of health in reference to the public health, the legally qualified irregular may, also, be consulted with in reference to the health of the individual. There is an old and homely maxim, perhaps too homely for quotation here, about sauce which is *a propos*. Surely the sauce with which the regular member of the board of health is dressed, may be most appropriately used to garnish the private practitioner.

You will be able now, perhaps, to see that altered circumstances must modify the application of principles. Forty years ago the medical profession in this country stood alone. All laws regulating the practice of medicine had been repealed or were a dead letter. The profession stood upon its own merits, asking for and receiving no favors. If the great public did not choose to protect itself against ignorance and quackery the profession preferred to be calmly serene, rather than to appear to seek protection for itself. It could be as dignified and exclusive as it chose, and it chose to be both in an eminent degree. When the American Medical Association was organized, it, and the members of the profession at large, were free from all entangling alliances. Under such circumstances the section of the code regulating consultations recommended itself to the judgment of the practitioner, and in its working there was no friction. But, alas! it is so no longer. Wisely, or unwisely as individual judgment may pronounce it, alliances have been formed and their entangling complications are now embarrassing us.

Do you ask me for a solution of these difficulties? Admonished by the time which I have already occupied, I am reluctant to attempt one on this occasion. I shrink too from a task that has drawn down upon the State society of the Empire State the frowns of the American Medical Association.

But I may not shrink from giving you advice as to your conduct in reference thereto.

First. From an ethical standpoint be ever mindful of the fact that within the true Æsculapian fold you have unlimited freedom of medical creed and practice, and that a healthful and vigorous *esprit du corps*, which is the very soul of ethics, allows you to

use the honorable title of Doctor of Medicine without qualifying designations of any kind whatever.

Second. Study thoroughly the code of the American Medical Association, and also the State laws relative to public health and the licensing power, and thus enable yourselves to form a clear and definite opinion as to "what's the matter."

Third. Promulgate that opinion on all suitable occasions, and be ever ready with your voice and vote to lend your aid in reconciling conflicting conditions, by amendations and emendations both of the code and the State laws.

Fourth. Pending such changes, rendera lligiance to the code; so will you truly represent old Rush, your Alma Mater.

ARTICLE II.

PATHOLOGY OF BRIGHT'S DISEASE. By C. W. PURDY, M.D.

The morbid anatomy accompanying the various lesions and stages of albuminuria has received valuable elucidation from various sources within the past few years. The coarser anatomical textural changes are now pretty well understood, but the more minute microscopical changes which occur in the course of these morbid processes, may be said in some instances still to be obscure. This in itself does not seem so surprising if we consider that the histology of the kidney is not as yet an entirely solved problem.

The nomenclature of the subject also, as at present accepted, is liable to lead to some confusion as to the nature of some of these lesions. Interstitial nephritis for example, would imply an inflammatory process, but it is extremely probable if not actually demonstrated, that the changes occurring in this lesion are in no sense of an inflammatory character.

The pathology of renal diseases is by no means limited to the kindeys themselves, but, in almost every instance, more or less grave departures from normal texture is found to accompany the disease in quite a number of organs remote from the renal. A very comprehensive study of renal pathology would extend far

beyond the necessary limits of such a paper as this, and hence we must be content with a mere glance at the more important lesions outside the kidneys and limit the greater portion of what we have to say to the pathology of the kidneys themselves. In studying the history of each special lesion we have seen that symptoms vary very materially with the stage of the disease. It is equally so with the pathology. In the early stages of the lesion we find the slighter forms of textural change, which, followed onward, become more grave and have also added to them others of more or less importance. Hence the pathological history of a lesion becomes a subject very extensive in itself to follow minutely through all its variations. A minute description of all these would furnish sufficient material for quite a hand-book, and hence we shall be obliged to confine ourselves for the most part to a description of well marked typical cases of each lesion, pointing out only the more important variations therefrom which are most commonly encountered.

Following the same order of description dwelt upon in a former paper on "Diagnosis," the first subject to be considered is

THE PATHOLOGY OF PARENCHYMATOUS NEPHRITIS.

At once the most frequent and the most curable of the forms of Bright's disease, its pathology is probably at present most thoroughly understood. Most authors have divided the disease into several clinical and pathological stages. Grainger Stewart claims for it three distinct stages and describes at length the pathology of each.

The division into acute and chronic stages, however, seems to be the one most commonly followed, and probably corresponds best with the clinical and pathological history, for the changes in all the stages are essentially the same in character, varying only in extent with that of the disease and the length of time they may have been in progress.

If the kidneys be examined after death which resulted during well-marked acute parenchymatous nephritis, the organs will be found considerably enlarged, varying somewhat according to the intensity of the inflammation. The capsule is unaltered, save that it may be congested, and it is stretched. It usually strips off

easily. The kidneys are softer and less elastic than in health, and are more easily broken down. The surface is smooth and mottled, and more or less congested.

On making a section of the kidney, it will be at once observed that the cortical portion is much increased relatively. The malpighian bodies are enlarged two or three times their natural size, and stand out prominently as dark red spots. Small extravasations of blood may be seen studded through the cortical, which latter itself is seen to be more or less congested.

The pyramids are deeply congested, exhibiting a deep, dark red color. In cases of extreme swelling of the cortical, their interpyramidal layers crowd in upon the pyramids, compressing their middle portions, and thus forming the wheat-sheaf appearance first pointed out by Rayer. The vascular spaces at the inner edges of the cortical are intensely congested, as are all the smaller renal vessels. In cases of extreme congestion, as where death has resulted from uræmia after sudden suppression of urine, the cortical may assume a darker, dirty brown color.

The microscopical changes are limited to the cortical portion of the organ, for the most part, so far as we have any knowledge. The earliest changes noted are those of a cloudy swelling of the epithelium of the tubes and that of the glomerule. This consists of an infiltration of albuminous granules into the cells, which latter become swollen, more granular and dense, and the cell wall and nucleus less distinct. Occasionally they may contain a few fat drops, though this is more common in the advanced stage. Owing to the enlargement of cells, the tubes become broader in their transverse diameters, and at the same time the lumen of the tube is reduced in size, and sometimes completely closed. As the disease progresses, the tubes become filled with epithelium, free granular matter, and sometimes red blood corpuscles. In some cases, the tubes are filled with a transparent homogeneous material. These becoming detached, carry away with them on their surface a coating of epithelium, and, appearing in the urine, may be seen as epithelial casts. Minute extravasations of blood occupy the tubes in places, which come from the capillaries of the glomerule.

Oertel says that in renal disease following diphtheria, he has found "great numbers of micrococci and exuberant proliferations of the same." Heller claims that he has frequently found in the blood-vessels, in acutely inflamed and swollen kidneys from pyæmia, plugs consisting of spherical bacteria and bacteria-emboli.

In many places the epithelial lining of the tubes desquamates, throwing off entirely the lining. At some places we find the tubes filled quite uniformly with dark masses, products of epithelial growths, blood debris or transparent fibrine. In other places these obstructions are only partial, some tubes only being plugged, and this is usually when the disease is of short standing.

As the disease advances and the acute stage to some extent subsides, the epithelium lining the tubes takes on a fatty metamorphosis. The tubes are observed under a high power to be filled with fatty granules mostly contained, however, within the envelope of the epithelial cells. These latter are imbedded in fibrine, which chokes up the tubes in irregular portions. The above changes never occur in the outset of the disease but must be the result of at least three to four months progress.

But, to return to the acute stage of nephritis; the malpighian bodies stand out prominent, enlarged, and congested, deeply reddened in color. The alterations in the glomerule and its capsule has been the subject of much discussion. Klebs claims that the cavity inside the capsule is filled with angular small nuclei, imbedded in a fine granular mass which almost completely covers the vascular tuft. He claims that this is not the endothelial lining of the capsule, for, on careful dissection, this endothelium is found very slightly altered, occasionally fattily degenerated. He further claims that the compression of the vascular tufts by this hyperplasia, causes the sometimes sudden diminution or almost entire suppression of the urine and acute dropsy followed by uremia and death.

Johnson, in his lectures on Bright's disease (1874) observes, "That the nuclei in the walls of the capillaries of the malpighian body are abnormally conspicuous." Cornil and Ranvier speak of "a swelling and granular condition of the capsular epithelium, and nuclear proliferation and fatty degeneration of the capillary walls."

Langhans has recently furnished what is probably the most complete and exhaustive description of the changes occurring in the malpighian bodies published to date. He claims three sets of cells are contained within the malpighian body, namely, those lining the capsule of the body; those covering the glomerule or capillary coil; and those of the capillary vessels. All three of these, he claims, share in the pathology of nephritis.

He says, "The epithelium of the capsule in the slight degree of alteration, merely results in overgrowth of cells. The nucleus is larger, more oval, and almost fills the cell. Increase in the number of cells is a more rare occurrence. In the spaces between the layers of cells are found smaller and larger lymphoid cells and more frequent still is partial thickening of the capsular epithelium."

"As to the alterations in the glomerule epithelium, the cells are less adherent; at least, they detach easier as a whole, instead of in part, owing to the dissolving of their connecting plasma. The cells themselves are said to be little altered, sometimes swollen, and when so, the thicker nucleated portion of the cell is the exclusive seat of swelling, making a club-like form of the cell, which may, indeed, separate completely, leaving the free, un-nucleated portion as an independent cell.

"As to the changes in the capillary nuclei, the glomerule is enlarged, and fills closely the capsule. The epithelium of the glomerule, as a rule, is simply swollen, especially its nuclear portion. The lumen of the capillaries is found more or less occupied by a cloudy, more or less granular substance, sometimes containing fat drops. In it are found numerous small, round nuclei. These lie in the fine granular mass, and do not adhere to the capillary wall. These capillaries are still pervious to blood under high pressure."

Langhans has never found this condition absent in the large white kidney. Bartels agrees with Langhans that the nuclear proliferation of the capillaries has the effect of diminishing the secretion of urine.

Such, in the main, are the alterations found in the malpighian epithelium in nephritis, as observed by Langhans, consisting, for the most part, first, in cloudy swelling, passing into fatty degener-

ation in the last stages of the disease, and also into disintegration and exfoliation.



FIG. 1.



FIG. 2.

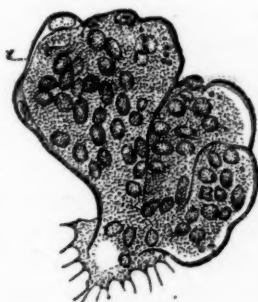


FIG. 3.

FIG. 1.—Proliferation and thickening of capsular epithelium with compression of glomerule.

FIG. 2.—Desquamative glomerulo-nephritis; surface of the capillaries.

FIG.—Capillary loops with proliferation of the nuclei.

—After Langhans.

The intertubular fibrous tissue is subject to slight changes in the later stages of nephritis. In acute cases, as a rule, there are no interstitial changes. When occurring, as they do in the advanced stages, they are doubtless due to long-continued hyperæmia

of the kidneys, resulting in hypernucleated overgrowth of the corpuscles of connective tissue. This, with saturations of exudations, and to some extent, also, effusion of white blood cells, increases the spaces between the tubules. The next step in the process is contraction at the expense of surrounding tissue, and hence, in the very advanced stages, we get more or less secondary contraction, according to the degree of interstitial involvement.

This brings us closely in relation to primary granular atrophy, or fibrosis, from which, however, it is not difficult to distinguish by the following characteristics:

In fibrosis, as a rule, the tubes will be found uniformly little, if at all, affected; while in nephritis they will be found in all stages of the changes just pointed out.

In atrophy from fibrosis, the fibrous stroma is very greatly increased; in the inflammatory form it is not increased to any extent. The capsule, too, is more adherent in true fibrosis, and cysts are much more common than in nephritis.

In the acute stage, the organ is everywhere engorged with blood, and congestion is prominent. The cones are darkened; the cortical itself appears a dirty reddish shade, and little spots of extravasated blood may be seen dotted here and there through recent sections, which drip with dark-colored blood. The malpighian bodies stand out enlarged, red and prominent.

After a variable time of perhaps two to four months, if the disease does not terminate in resolution, the chronic stage is entered upon, or, in some instances, the action is less acute from the beginning. The deep congestion has subsided, and the cortical is pale in color. The kidney is large and swollen. The most marked changes now found are the advanced epithelium metamorphoses in the malpighian bodies, and in the tubules already described. In some instances, the interstitial changes are super-added to the above.

The condition of the urine in nephritis deserves special consideration from a chemical standpoint. As a rule, all the natural constituents of the urine are more or less diminished. Albumen is always present, and in proportion to the extent of the disease and in direct ratio to its intensity, usually ranging from 60 to 90 per cent by bulk in well developed cases.

Casts of fibrine containing epithelial cells, or the latter caked together into rods, as molds of the tubules, are found most frequently in the early stages. Granular casts, which are merely epithelium broken down, are found usually somewhat later. Transparent casts of fibrine (small if the tubes retain still their epithelium, large if the tubes have lost their epithelium) are found and known as waxy casts. These are usually found in very advanced stages of the disease.

As to the natural elements of the urine, urea is diminished and directly in proportion to the intensity of the disease or the amount of urine passed. In ordinary cases it is reduced to about one-half, say 14 grammes in twenty-four hours. Extreme diminution is a very ominous symptom and most liable to be followed by convulsions. In convalescence, the urine becoming established again, the urea may rise to 50 grammes.

The diminution of uric acid is less marked and probably does not fall far short of that in health, or it may slightly exceed the latter in some instances.

Phosphates fall about one-third in quantity, which is considerable less of a reduction than takes place in either of the other forms of renal disease. Sulphuric acid is diminished one-sixth to a third, and this reduction is pretty uniform.

Chlorine, which in normal urine is present to the extent of about 8 grammes or a little more, is sometimes totally absent in nephritis. It always suffers greater reduction in this than any other form of Bright's disease. Potash, soda, lime and magnesia are diminished, but we have no reliable estimates as to the exact amounts.

The blood crystalloids are frequently present in the urine in very early stages, often before that of albumen. Dickinson says: "A state of urine in which the crystalloids of the blood only are discoverable is a pre-albuminuric stage, and it would seem that at least in some cases the sapphire blue imparted to the urine by its admixture in a test tube with tincture of guaicum and ozonic ether, declares the presence of those elements of the blood before the less fluent albumen has been able to traverse the coats of the vessels." This is hence a most valuable and early diagnostic of renal disease which is well worth remembering.

RENAL FIBROSIS.

If the kidneys be examined after death which occurred during well developed fibrosis, the organs will be found much smaller than in health, weighing from one to three and a half ounces. They are not always symmetrically reduced in size, one frequently being found considerably smaller than the other.

The surface is found irregularly nodulated and furrowed. The capsule is much thickened and considerably adherent, and consequently is with difficulty stripped off, carrying with it usually detached portions of the corticle. On removal of the capsule, the surface of the organ is seen to be uneven and granular. These granular spots are little hemispherical elevations ranging in size from one-twenty-fifth to one-fifth of an inch, and consist of small knuckles of tubules twisted and contorted from their natural course. These granules are of lighter color than the depressed portions intervening, which latter are slightly vascular. Numerous cysts are usually found scattered over the surface of the kidney varying considerably in size. The consistence of the organ is very much altered, feeling to the finger firmer and less elastic than normal, and on section with a knife it is found tough and resisting. This is more especially the case in the cortical.

On section through the organ it is observed that the cortical is most decidedly altered, being contracted and shriveled up in some cases perhaps to one-sixth of an inch in width. The cones are less affected though a little diminished also, and small cysts are found both in the cortical and medullary portions. The malpighian bodies are much reduced in size, so much so as to be scarcely visible to the naked eye. The small arteries everywhere are much thickened in their coats, and very prominent. Small needles of urate of soda are frequently seen streaked between the intertubular portions of the cones and also scattered throughout the cortical. This is particularly observable in gouty subjects. Da Costa has observed the constant presence of increased amount of fat surrounding the fibrotic kidney, even in emaciated subjects. (See *Am. Jour. Med. Sci.*, vol. lxxx, 1880). The pelvis of the kidney may appear contracted if the cones are little affected, or it may, more often perhaps, be dilated if there is contraction of the cones

Under the microscope the most marked change is found to be an exuberant growth of connective tissue, most observable in the cortex, and destruction of the tubules and small blood vessels. This overgrowth of connective tissue is found in all stages of new development, and is not, be it remembered, a shrinkage of the old connective tissue of which the cortex is sparingly supplied. Dickinson has traced capillaries of evident new growth into this new fibrous tissue in places where it is found in quantity. The most plentiful amount of new fibrous tissue takes its rise at the surface of the cortical, particularly at the depressions between the granular elevations, and extending inwards in rays, envelop thickly the malpighian bodies, the tubules, and small blood vessels.

The secondary process which invariably attends the growth of new fibrous tissue in other organs, follows the same course here, namely, contraction. The effect of this is to compress, through their thickened capsules the malpighian bodies. The effect on the minute vascular system is to contort, in some places to dilate, but ultimately to contract and obliterate the lumen of many of the capillaries. The tubules are some of them dilated, but more of them contracted, particularly in sections, but for the most part, their epithelial linings are not essentially altered. Dickinson says that any alteration found in the epithelium is merely that of form, the cells appearing more cramped and pressed into angular shapes. The tubes are often occupied by transparent fibrous matter, oil globules are sometimes found through this, or again, the former may crumble into granular material and become packed with casts of this broken up fibrine. The cysts previously spoken of result from contraction or blocking up of the tubes at certain portions, and dilatation of their distal calibers.

On examination under high power, we find the muscular coat of the vessels increased. This thickening of the muscular coat in time is followed or accompanied by nucleolar shrinking, which gradually gives way to coarse transverse fibrillation. Evidences of fatty degeneration follow, particularly at the inner margins of the muscular coat. The outer or fibrous covering of the vessels becomes markedly thickened; under the microscope it appears as if swollen with nearly clear exudative matter (a condition of evi-

dent atheroma). This is usually secondary to the changes noted in the muscular coat of the vessels.

This muscular thickening of the vessel coats, advancing to degenerative changes and thickening of the fibrous sheath, it is important to note, is not confined to the vessels of the kidneys, but a similar simultaneous change pervades the systemic arterial tubework, of which we shall have more to say presently. Many of the capillaries in the cortical, in consequence of this thickened over fibrillation of the coat and interspaces, become obliterated, and this is especially noted in the capillary coils of the glomerule.

As to the changes found in the urine, nearly all the natural constituents are diminished except water, which latter is rather increased, except it be in the very late stages.

The urea is always reduced; most so, however, in the advanced stages, averaging from ten to twenty grammes a day in well-marked cases. Uric acid is slightly reduced in the early stages, and in extreme cases it may be totally absent. Phosphoric acid is much diminished, usually to one-fourth the normal quantity; in the late stages there may be but one-fiftieth, or even less. While the amount of phosphoric acid is thus usually much diminished, it varies much, and the quantity is very irregular relatively.

The sulphuric acid is reduced comparatively little to that of the phosphoric, hence it often predominates over the latter.

Chlorine does not suffer much reduction, nor does the chloride of sodium, save in the later stages, when the reduction is very decided.

The alkalies and earths are generally reduced, though the exact extent is unknown.

Of the changes which occur elsewhere in fibrosis, thickening of the cranial vertex may be noted, and this, too, is usually accompanied by thickening of the dura mater, which is adherent to the internal table of the skull. Apoplectic effusions of blood are frequently found in the brain, and sometimes into its ventricles.

I have mentioned elsewhere that visual disorders are a very common complication of renal fibrosis. In the most serious form of this there is swelling of the surrounding disk of the retina, and hypertrophy of the nerve fibers. Virchow likened them to sclerosed ganglion cells. Most authors class them as varicose

hypertrophies of nerve fibers. Fatty deposits are found in the fiber or muscular layers of the nerve tissue. The connective tissue fibers of Müller become the seat of fatty changes, giving rise to white streaks on the macular region. The blood-vessels of the retina are subject to the same changes as that in the vessels elsewhere, and hæmorrhages are very constantly to be observed between the retinal layers, or sometimes even in the vitreous humor. The changes described above are those due to what is termed albuminuric retinitis, and, though recurring sometimes in the course of nephritis, are much more commonly the result of granular atrophy. The transient disturbance of vision known as uremic amaurosis is quite another disorder; rapid in its development, it may pass off without leaving any pathological or physiological evidences of its invasion.

The last and most interesting of the pathological changes associated with renal fibrosis, coming under our notice, is hypertrophy of the left ventricle of the heart.

This change, while undoubtedly found in a few cases of nephritis and amyloid disease, especially in their later stages, yet it is doubtful if it occurs sufficiently often in any uncomplicated renal disease save in fibrosis, to entitle it to rank with prominence as a part of the pathology. The fact that hypertrophy of the left heart occurs only in advanced stages of nephritis and amyloid disease, and that it is a constant and early accompaniment of fibrosis is sufficient to relegate it to the pathology of the latter disease. Its occurrence with fibrosis is estimated in frequency by various authors from 40 to 100 per cent. If we seek to unravel the etiological phenomenon of the morbid change, we are forced to admit in the end, that there remains as yet some underlying cause which has not yet been satisfactorily demonstrated.

A very eminent and numerous school claim that as the kidneys fail to eliminate all the waste products of tissue metamorphosis there remains in consequence in the circulation a large amount of foreign substances more or less poisonous, and this renders the blood more resisting to the small vessels and to the tissues, and in order to overcome this resistance the left heart becomes more powerfully developed.

But if we glance at the chemical changes which occur in the

urine as the result of nephritis, and compare them with those resulting from fibrosis, we find very little essential difference in the two conditions. Why, then, if this poison theory (if I may so term it) be true, is it that we do not have hypertrophy in nephritis as commonly and as early as in atrophy? for remember, these urine changes are more early by far in nephritis than in atrophy (see table of urine). Again, it would scarcely be in keeping with what we should expect physiologically; if elements which are constantly in the circulation during years of most perfect health, without exerting any morbid change in the heart or vessels; to find that by a moderate increase of these elements in the circulation, so serious an organic change would at once fall upon the heart and vessels; more especially as we look to the circulation as the great prime depurating channel of the system; as the only means of ridding it of the accumulation of these same waste products. We have elsewhere given in full our reasons for disbelieving that any mechanical obstruction in the kidney circulation, due to renal disease, can be the cause of hypertrophy of the heart, and we believe that any such position cannot be maintained. There seems to me much reason in the old and perhaps largely rejected theory of Gull and Sutton, which is that a general fibrotic change, simultaneous with that in the kidneys, occurs in the vessels everywhere, destroying their elasticity, and thus hindering the flow of blood through them to the extent that the heart must increase its power to sustain the circulation. Recent physiologists claim that the blood-vessels do not contract in a vermicular wave from the heart onward, and thus assist the onward current from the ventricle. However that may be, we know that at least, when the fibrotic and muscular change attacks the vessels, they lose their elasticity, and thus resist the cardiac impulse, as we shall attempt to demonstrate. To illustrate this, let us suppose that a heart contracts with a given power, and all the vessels leading therefrom are highly elastic, which we know to be the case in health. With each contracting stroke of the heart these tubes expand quickly, limited only by the force of the ventricular stroke. This stroke of the ventricle being quick and sharply defined, the larger vessels hold for an instant an increased amount of blood. The aortic valves closing sharply at the

termination of the contraction of the ventricle, the heart is relieved for a moment of the blood pressure from the vessels. Not so with the aorta and great vessels, which for a moment are dilated to an elastic force equal to the power of the ventricle at the close of its stroke. The vessels filled with blood now exert their elastic force upon it, lessening gradually till they reach their undistended calibers. This elastic vessel force, so long as the aortic valves remain closed, is one entirely independent of the heart. Thus we see, the vessels in a state of health do propel the blood independent of the wave or vermicular theory.

Let us now suppose that the vessels lose their elasticity through degenerative muscular change and fibrotic disease. Let it be supposed that their elasticity is largely abolished, and that they approach in this respect unyielding leathern tubes.

The left ventricle contracting with usual force, the blood responds to the pressure of the stroke, and rushes into the large arterial trunks, and thence through the smaller branches. Instead of meeting everywhere with elastic yielding walls which recede from the force of the blood wave from the ventricle, it everywhere meets with rigid resisting force of unyielding tubes. An extra force therefore, exactly equal to the elastic power of the normal vessels, acts counter to the blood current in the arteries and thus extra resistance must fall largely against the ventricle at the moment of its contraction. The first effect of this is to produce a more prolonged contraction of the left ventricle, because a short quick stroke will not relieve the ventricle of all its contained blood as the inelastic arteries do not receive it so quickly. We hence notice a prolonged systolic sound, heard loudest over the region of the left ventricle.

It requires little reflection on the above facts to show that the effects of diseased vessels must produce increased muscular development of the left ventricle, for increased functional necessity is always met with increased physiological development.

Such have been my own reasonings as to the causes of hypertrophy of the left ventricle of the heart which so constantly accompanies granular disease of the kidney, and to my mind it best explains the philosophy of this interesting morbid phenome-

non, as well as its invariable appearance in the early course of the disease.

But it is asked if hypertrophy only results when and as a result of arterial degeneration, why is it that we find it often recorded as an accompaniment of nephritis and amyloid diseases of the kidneys as well? My own opinion is very strong that it is almost never found to accompany a case of pure uncomplicated nephritis, and the constantly decreasing number of cases now recorded since more advanced and accurate clinical observation has been compared with post mortem observation lends strength to the conviction. Bartels says, "I have never yet succeeded in tracing anatomically in the dead body the transition from inflammatory swelling of the kidney into that of true cirrhosis."

With reference to amyloid disease, however, it must not be forgotten that degenerative changes in the vessels is one of the constant pathological accompaniments of that disease which we shall speak of at length in the proper place. It would not, therefore, surprise us so much to find hypertrophy accompanying amyloid disease as that of nephritis, though this too is rare, for reasons which we shall afterwards explain.

It is proper that we should next consider the nature of the morbid anatomy of renal fibrosis. The name perhaps most commonly assigned to it (interstitial nephritis) would rank it among the inflammations, but it lacks many of the elements of a true inflammation. Seldom preceded by congestion, it on the contrary, takes its origin in the most imperceptible manner, and its march is so extremely tardy that we can scarcely conceive the process to resemble even the more chronic grades of inflammatory processes. Grainger Stewart is perhaps the most emphatic opponent of the inflammatory origin and nature of the disease. He denies that free exudation is to be found in the early stages among the elements of the stroma, and he further points out that excessive formation of connective tissue is frequently found, due to other sources than that of inflammation.

Dr. Handfield Jones advocated ably the non-inflammatory doctrine, and after pointing out that fibrous deposits occur in serous membranes, in certain forms of cirrhotic liver, in the mucous tissues of the stomach, in the testicles, uterus and lungs, he says

"that in all these instances, the process may be from the first non-inflammatory, depending on the exudation of blastema tending abnormally to fibrine development, and not simply maintaining the nutrition of the part." Dickinson, after observing that the disease has nothing in it of inflammatory haste, says: "If the gradual changes in the fibrous tissue which constitute the disorder can be described as inflammatory, the inflammation is of such a slowly progressive sort that it is only in exceptional cases that it is possible to fix the commencement. In the overwhelming majority of instances, the origin of the complaint must be sought, not in chance exposure, nor transient circumstances of any kind, but in influences of a continuous nature." Bartels says with emphasis, "this process leads from its commencement steadily to the dwindling of the substance of the gland, a wasting preceded by *no anterior inflammatory swelling of the gland.*" In view of all the facts, the true pathology of fibrosis is probably not of an inflammatory character. The process begins in isolated spots in the cortical, and spreads slowly. If inflammatory in nature, we would expect it to be more diffuse. The most vascular portions of the gland are not the ones the disease is most prone to attack. If free exudation were poured out into a gland the nature of the kidneys, it would affect primarily or simultaneously the tubes, and moreover, we would have as a result free albuminuria, which is not the case.

Lastly, the same process takes place in the fibrous tissue of the vessels early in the disease, pointing to some obscure general systemic influence, whose course it is difficult to reconcile with inflammation in its nature.

Some consider the nature of the changes which occur in granular atrophy to be a part of the general fibrotic tendency of old age, and the fact that the great majority of cases occur during advancing age would seem to lend some force to this supposition. At the same time, it must not be overlooked that in a few cases the disease has been found in its typical form in children, and here the same simultaneous early changes are found, both in the hypertrophied left ventricle and in the degenerated blood-vessels.

It is more probable, hence, that whatever may be the general systemic influences determining the process, its primary cause

is in some way of a local nature, depending on the kidneys themselves, though the exact nature of this yet remains for science to demonstrate. The fact that it occasionally occurs in childhood in a typical form; that, as claimed by careful observers, it is an occasional sequence of nephritis itself; at least, interstitial changes do occur in the latter stages of nephritis, with changes in the vessels and left heart which, as far as can be judged, do not differ pathologically from fibrosis, and, moreover, its occasional appearance in advanced amyloid disease (though this is rare), would seem to indicate that the whole pathology of the disease must to a great extent owe its origin to some change in the kidneys themselves, though possibly largely influenced by at present obscure constitutional tendencies.

Drs. Da Costa and Longstreth, in the *Am. Journal of Medical Sciences* for July, 1880, publish a paper in which they point out certain changes in the nervous renal ganglion associated with contracting kidney. In nature, the changes consist in a hyperplasia of the connective tissues and fatty degeneration of the nerve cells. They think it is the cause of the renal malady, and precedes the degenerative changes elsewhere, at least that in the kidneys. They claim that the diseased ganglia furnishes the clue to the alterations in the vessels of the kidneys, and that similar changes, producing similar results, may exist in other ganglia, for instance, in the cardiac plexus, explaining the hypertrophy of the heart.

While I should be inclined to ascribe these changes to a part of the general degenerative processes connected with renal fibrosis, it is yet possible that the origin of the latter may have some central relationship.

AMYLOID DISEASE.

The pathology of this disease is quite as far-reaching as that of fibrosis, if, indeed, not more so. As a degeneration or deposit of morbid material, it attacks the small arteries, capillaries, and non-striated muscular fibers in various parts of the body; in the liver, spleen, kidneys, stomach, intestines, pancreas, lymphatic glands, and less frequently in other situations. Dickinson claims that the change is an infiltration of a new material into the tissues,

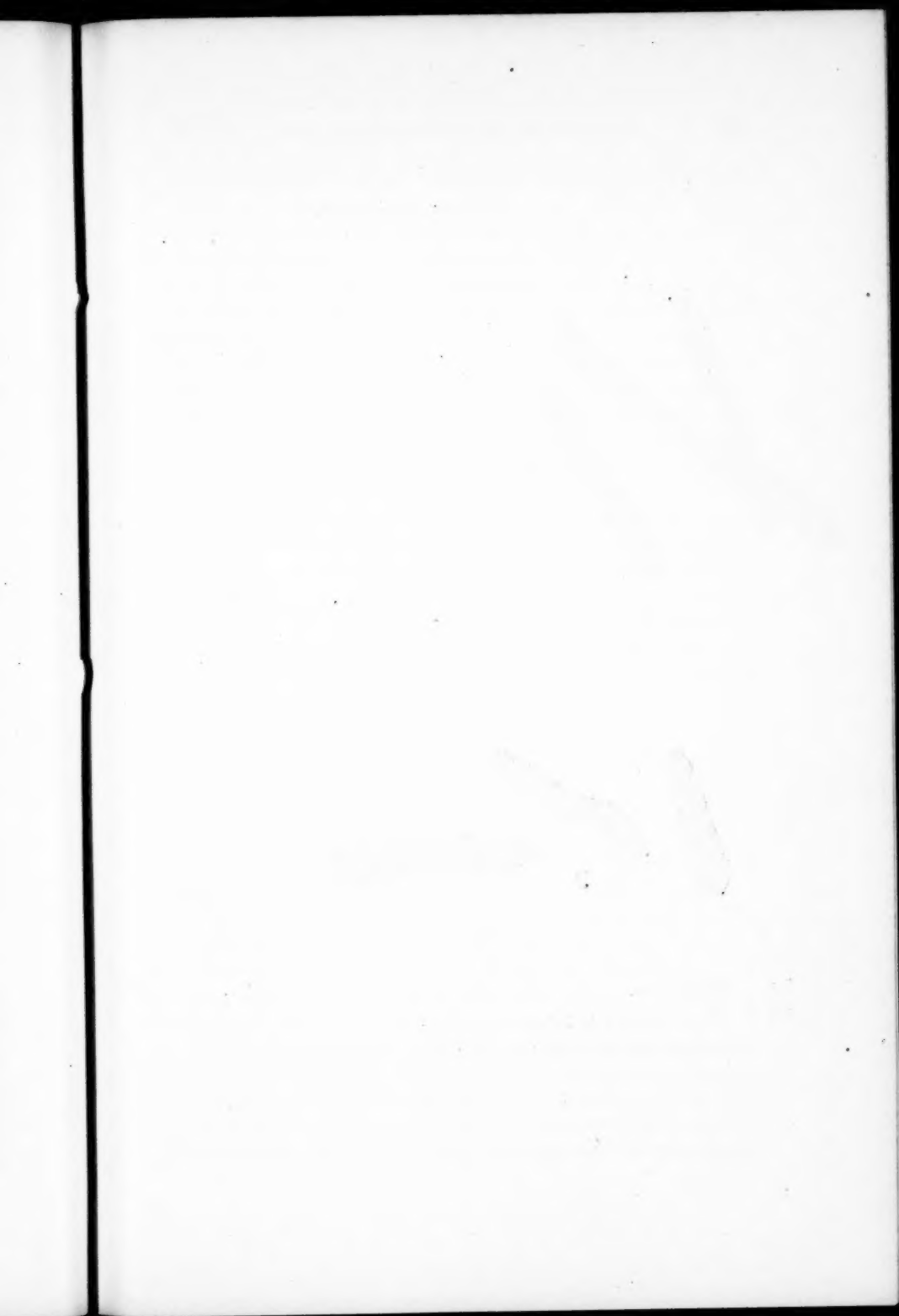




FIG. 1.—Waxy Casts.

FIG. 2.—Usual Change with Iodine.

FIG. 3.—Casts showing Characteristic Amyloid Reaction with Iodine.

and Grainger Stewart is equally emphatic that the process is one of degeneration in existing tissues.

Whatever may be the nature or origin of the morbid process, its recognition is without question a chemical one, resting on its peculiar behavior with iodine solution, which latter instantly turns it a dark brown color wherever found; be it in the kidneys, liver, spleen, or intestinal vessels.

If the kidneys be examined after death during well-marked amyloid disease, they will be found to present the following characteristics: They are enlarged, perhaps to twice or more than their normal size. As a rule, the capsule strips off easily, showing a pale, smooth, anæmic-looking surface, on which occasionally the stellate veins may be seen prominently.

The organs are usually symmetrically affected. On section, the cortex is found to be increased in thickness, pale, waxy and in thin sections translucent. To the feel it is firmer than normal. The pyramids do not seem essentially altered in color or form. The malpighian bodies are enlarged and are often observed as prominent semitranslucent spots which readily assume a dark brown color when treated with solution of iodine. The capillary walls of the malpighian tufts are thickened owing to infiltration of the peculiar lardaceous matter.

The capillaries of the cortex are similarly involved as are also the vasa recta of the cones.

An exudation of clear glistening material is found in the tubes, the nature of which is not entirely agreed upon. Dickinson thinks it is identical with the amyloid material found in the malpighian bodies and coats of the vessels. Grainger Stewart says it exactly resembles the material of hyaline tube casts, and it does not give the peculiar reaction with iodine. Some observers claim to get the iodine reaction on these casts though not by any means uniformly so, in fact it may be considered an exception rather than the rule.

The tubules themselves are peculiarly affected. Amyloid infiltration without doubt takes place in the basement membrane thereof. The epithelial cells may become enlarged, lose their outlines, and become the seat of fatty deposit. While we thus have swelling both of the epithelium and of the basement mem-

brane and consequent thickening of the tubule, yet, the lumen of the tube does not become contracted or narrowed in its diameter, but, on the contrary, remains remarkably open. This peculiarity becomes very striking on transverse section, when the open end of the tubule preserves its marked rounded outline, like the open end of a gun barrel.

It is not usual for the epithelium of the tubes to desquamate or break down unless some degree of nephritis complicates the case, which it may do in the latter stages, and then, as we would expect, the urine decreases in quantity and we get epithelial casts in the urine. The swelling of the organs is due to thickening of the vessel walls, swollen cells and basement membrane of the tubules, and more or less dilating of the tubes with material forming casts, and swelling of the malpighian bodies from similar causes.

Such are the typical changes found in the amyloid kidney after death, in well marked cases. But the pathology of lardaceous disease is not confined to kidney structures, and moreover, does not originate there in all probability and hence, a brief consideration of the morbid anatomy found in other organs becomes necessary to understand fully the pathology of the disease.

The liver is pretty constantly found enlarged, pale waxy looking, and shows similar translucency at the borders of sections made with the knife. The cells are found enlarged with obscured nuclei. The smaller arteries manifest the same degeneration as those found in the kidneys. These morbid deposits, if we may so term them, respond to the iodine test the same as those in the kidney.

The spleen is almost constantly enlarged in amyloid disease and often enormously so. Here, too, the small arteries are the primary seat of the morbid change which, however, also involves the malpighian bodies and often the pulp.

In the intestines the small arteries become the primary seat of disease, the epithelium of the mucous membrane also degenerates, and the muscular coat of the villi are a prominent seat of the disease. According to Grainger Stewart, however, the substance of the tissues of the villi never becomes affected and rarely the muscular substance of the middle coat. Dickinson points out

that, in the intestines the exudation instead of being retained in the tissue, passes off like a secretion from the surface, giving rise to vomiting or diarrhoea, or both.

In the pancreas and lymphatic glands the small arteries are the principal seat of morbid change; rarely if ever does the secreting structure of these glands become involved.

Such are the most common structures involved in the course of amyloid disease. Less often, however, other structures suffer, and indeed, if the records are searched, it would be difficult to find tissues supplied by vessels which are exempt. The muscular fibers of the uterus and the arteries of the vagina are sometimes said to become diseased. Dr. Bennett claims to have discovered characteristic amyloid change in the placenta. In the heart Stewart has distinctly seen waxy vessels. Dr. Gardiner has found the same in cancer, and some observers speak of its presence in the lungs and brain.

As to the chemical alterations found in the urine during the progress of amyloid disease, water alone is increased and very largely so, in all cases till the latter stages, when it becomes diminished, probably as a result of disease of the tubes setting in. Urea is decreased, but not to the extent it is in either of the other forms of renal disease. The average may be placed at 15 to 20 grammes per day. The uric acid varies much. It may even be normal but usually it is diminished, and it is said sometimes to be absent.

Phosphoric acid is always reduced and more uniformly so than in either of the other forms of kidney lesion. It is usually reduced to about one-sixth the normal amount say one-half gramme daily or less.

The sulphuric acid is less marked in its reduction than that of phosphoric and hence it is usually equal to or in excess of the latter averaging about a gramme; chlorine is reduced less than in nephritis but more than in fibrosis.

Alkali salts are below the normal quantity as in other forms of renal disease probably the potash and soda salts are much more so.

Albumen is present, ranging from 40 to 60 per cent. by bulk.

Let us now ask ourselves what is the true pathology of the disease under consideration, and what is the nature of the morbid process resulting in this deposit found so profusely distributed over the vascular system and tissues of so many organs?

Dickinson is a strong advocate of the exudation doctrine and for a most elaborate discussion of this question with many interesting experiments thereon I would refer you to his recent excellent publication on the subject.

It has been shown by analysis that the morbid material is nitrogenous in its composition, and it is probably more closely related to fibrine than any other nitrogenous principle.

In a paper contributed to the fifteenth volume of the *Medico-Chirurgical Transactions* in 1867, by Dickinson, he thus discusses this question. "Lardaceous material is soluble in alkalies, and the morbid material has been dissolved out by alkalies, leaving the normal tissues almost untouched. If tissue containing the morbid product be washed with water, and afterward with dilute caustic potash, the tissue no longer yields the characteristic amyloid reaction with iodine." That there is a deficiency of potash in the diseased formation, he reasons as follows: "The amyloid reaction is always associated with the condition of acidity, for tissues soaked in a solution of hydrochloric acid will give a deeper tint with iodine than those which are not thus treated. Again, albumen precipitated by an acid will take and retain the color of iodine, which it will not do if not thus acidified. Fibrine, treated with the same acid, gives a striking counterfeit of amyloid material, which in all respects reacts with iodine so nearly similar to amyloid matter that it seems akin to the morbid product. Lastly, the realkalization of the fibrine will render it again insusceptible of lardaceous reaction." He further shows, by statistics of his own and those connected with St. George's Hospital, that four-fifths of the cases of amyloid disease arise from suppurative causes. It is well known that suppuration draws largely on the alkalies of the blood, as proven by the decided alkaline reaction of pus, and also the marked diminution of alkalies in the blood during exhaustive suppuration. The position of Dickinson in this matter at first sight would seem a very reasonable, if not a strong one.

But Ebstein, in a very careful review of the subject, distinguishes between albuminoids proper and the amyloid material very distinctly, as follows: "Their similarity is that they both are closely allied in their chemical composition, both give the xanthoprotein reaction, and respond to Mellon's test, and if boiled in a dilute acid, they conform to leucin and tyrosin in the products into which they subside. But, on the contrary, amyloid matter has greater power of resistance to many solvents, especially its utter insolubility in dilute gastric juice. Again, amyloid material does not putrefy, even in months, and it resists most obstinately suppurative action."

Friedrich affirms that the morbid product results from the gradual transformation of fibrine.

Whatever may be the exact nature of the morbid material which everywhere responds to the iodine solution so characteristically, its method of production is explained in two ways. Dickinson, as before mentioned, claims that it is a free exudation from the blood into the tissues, and in this he is supported by Budd, Portal, Rindfleisch and others.

Grainger Stewart opposes this doctrine with considerable force. He thinks if the process were simply an infiltration, it would not confine itself to the coats of arteries, but would infiltrate rather the softer tissues of organs, and not confine itself to limited portions of the same. He claims that the process is essentially one of degeneration, presenting exactly the characters of such, from the slightest alterations down to disorganization of structures.

I am inclined to believe that the morbid material is the product of albuminoids, modified in some form, first by a predisposition of the general system through certain diseases, such as syphilis, scrofula, suppuration and like processes, which profoundly modify the healthy character of the blood, and that the elaboration or transformation of this albuminoid matter is accomplished at the locations where it is found, for if the change occurred in the blood, then the morbid material should be susceptible of demonstration in that fluid, which, as yet, it never has been.

The process is, therefore, at least very closely allied to degeneration, which, in turn, may be the determination of a succeeding infiltration of the material, already considered.

APPROXIMATE TABLE OF URINE.

URINE IN HEALTH FOR 24 HOURS.	NEPHRITIS 24 HOURS.	FIBROSIS 24 HOURS.	AMYLOID KIDNEYS 24 HOURS.
Sp. Gr.....1020	1020 to 1040	1008 to 1018	1002 to 1015
Urea..... 512 Grns	140—250 Grns	160 to 280 Grns	256—350 Grns
Uric acid..... 8½ "	6—10 "	none—8 "	none—8½ "
Phosphoric acid..... 48 "	20—30 "	2 or 3—24 "	6—12 "
Sulphuric acid..... 31 "	20—25 "	25—30 "	22—28 "
Chlorine..... 1.6 "	none—50 "	100—120 "	40—90 "
Chlorine Sod..... 210 "	Diminished	20—280 "	Greatly reduced
Soda..... 171 "	"	Diminished	"
Potash..... 16—107 "	"	"	"
Water..... 35—60 oz	4—30 oz	Normal or over	Greatly increased
Albumen.	60 to 90 g by bulk.	6 to 20 g.	40 to 60 g.
Tube Casts.	Epithelial (characteristic) hyaline and dark granular casts; blood casts fatty in late stages.	Hyaline, pale granular. In latter stages dark granular, fatty casts.	Not numerous. Hyaline; fatty; waxy; sometimes reacting with iodine.

ARTICLE III.

THE UNITED STATES PHARMACOPŒIA. Revision of 1880. By
C. E. CLACIUS, PH.G., M.D.

This long-expected volume has been received, perused and criticised with all the curiosity and interest due to its importance. Although no law makes it obligatory upon any physician to prescribe the remedies formulated therein, or upon any pharmacist to keep them, as it is merely an agreement between the regular medical and pharmaceutical professions, that the latter shall have on hand certain remedies, with which the former will treat their patients, it is a matter of great importance, that this agreement be strictly observed, to secure all over the country a uniformity of those remedies in effect, taste and appearance, which is essential for the final result, viz: the healing of the sick, and for the material benefit of the profession.

This latest revision of the pharmacopœia is particularly interesting, more so than its predecessors; not so much for the numerous additions of new remedies or the omission of obsolete ones; not so much for the improvement of the classical Latin, or

for the restoration of the masculine gender to some names which for the last twenty years have erroneously passed for feminines, but for the abolition of the ancestral system of weights and measures, and the substitution therefor of *parts by weight*, in decimal proportions. This is a decidedly progressive step, and it is only to be regretted that the step is a little too short. The old octesimal system, with its Troy ounces of 480 grains and its avoirdupois ounces of 437 grains; with its pounds of twelve and of sixteen ounces; with its imperial gallons of 160 and apothecaries' gallons of 128 ounces, has existed too long, and given much annoyance to all who had to use them. Therefore the new arrangement, however defective it may be, is welcomed as the initiatory step toward a great improvement: a uniformity of weights and measures in every business, the introduction of the metric system in this country. Although continental Europe has introduced this system long ago, and although it has been accepted in scientific literature all over the world, the United States have, since they gave up the shillings and sixpences for dimes and half dimes, done nothing toward a uniformity among themselves and with other nations in the measure of values. The people of this country still use pennyweights, various kinds of ounces, bushels and Fahrenheit's thermometer, in all of whose favor nothing can be said except that the fathers have used them.

The new pharmacopœia has now adopted a decimal system, at least in the proportional strength of the preparations. That strength was formerly in drachms to ounces, and ounces to pints; now it is in proportions of 1, 5, 10, 15, 20, etc., in 100 parts. Thereby of course the strength of every single remedy is changed, of some in a higher, of others in a lesser degree, and while, in the large majority, the difference is hardly worth noticing, it is in some of the preparations of considerable importance.

Like every innovation and improvement, so brings this, beside its advantages, considerable temporary trouble and annoyance. The physicians, in making their prescriptions, have to accommodate their calculations of doses to the new order of things, and it cannot be denied that it will be quite a task for the memory of the practitioners to become familiar with the new strength of the

remedies which they are in the habit of using. The pharmacopœia has on pages 454 and 455 a table, which comparatively shows the difference in the revisions of 1870 and 1880 of such remedies where either the remedy or the difference, or both, were of sufficient importance to deserve special attention. That table is given below, and to facilitate the desirable acquaintance with the names, those remedies now stronger have been separated from those which are now weaker than in the former issue.

For the pharmacist, the trouble caused by the innovation is of a different character. His memory is not taxed much, because he has the book with the formulæ always on hand for information, but in this transitory period from the old to the new formulæ, he is occasionally called to account by the consumers of the medicines for a difference in taste and appearance of remedies, which, however slight it may be, is noticed by some sharp tongue and eye, and to avoid being suspected of having made mistakes, he has to keep on hand for the repetition of old prescriptions, the preparations of the old issue, beside the new ones. That state of affairs, however, will be only transitory, the new rule will soon reign supreme, and the old one be forgotten.

Besides the difference in the strength of remedies in the new issue, caused by the adoption of decimal proportions, another factor has to be taken in account by the physician, when he contemplates the dose for his patient, viz: the specific gravity of the fluids. The decimal proportion is calculated for the weighed fluid, not for the measured; but in dispensing, the fluid is measured, not weighed. The measured fluid ounce of 480 minims of an ordinary tincture, made with diluted alcohol, weighs only 450 grains, and the weighed ounce of 480 grains of the same fluid measures 510 minims; thus we have in 510 minims the decimal proportion of 480 grains (in a tincture of 10 in 100, 48 grains, not the decimal proportion of 510), because the alcohol weighs so much less than water. In the tinctures made with stronger alcohol, the difference is still greater; there the measured ounce weighs only about 420 grains, and the substance belonging to 480 grains is in 570 minims. Further, tinctures, made of an equal quantity of substance, and with the same menstruum, vary in specific gravity, because some drugs contain more extractive matter than others

which enters into the liquid and increases the gravity. On the other sides are the heavier fluids. A fluid ounce of syrup weighs 660, but 480 grains have the proportional strength of an ounce. Take for instance, syrup of ipecac. The new formula is: fluid extr. ipecac, 5 parts; simple syrup, 95 parts (of course by weight); the calculation would be, that the strength of that syrup is one in twenty, and that a teaspoonful contains 3 grains of the root, but it is not so; the fluid ounce of 480 minims has the strength of 660 grains, which means 1 in 16, or 4 grains to the teaspoonful. Thus the physician's calculations are somewhat marred by the specific gravity, and this is caused by the directions to use parts *by weight*.

The committee on revision state in the preface to the Pharmacopœia, that when they directed in the formulæ the use of parts by weight, they did so partly by the instructions of the convention which appointed them, partly with the intention to adjust the proportions of the new formulæ, so that the new preparations would not differ materially from the old ones. Is not this strange? The strength of every single remedy is changed for the sake of having decimal proportions, and then again are the decimal proportions sacrificed in order to keep nearer the old strength. The remedies are directed to be made by weight, while they are prescribed, dispensed and taken by measure; the trouble of calculating the doses is increased for the physician by bringing into question the specific gravity, merely to make the difference a little smaller, while a difference remains. If the committee of revision had made the progressive step a little farther, and had left out the words by weight; if they had adopted in all formulæ grammes and cubic centimeters, as they have done in the manufacture of fluid extracts, the physicians in calculating doses would have found a little more difference in the strength, with which, however, they would have become familiar as soon as with the smaller, but then the formulæ would have been more permanent, while, as it is, the committee of the next revision in all probability will have to cut another inch off the dog's tail, by converting the fluid weight into measure again.

Among the remedies which have been greatly affected by the new rule, opium and its preparations deserve to be mentioned.

Not only have the liquid preparations changed in proportional strength, powdered opium itself, of which they are made, has been raised in its standard morphine value. While the former issue directed that no opium should be used containing less than 10 per cent. morphine, the new one says that opium shall not contain less than 12 nor more than 16 per cent. morphine. Although the chances of morphine in opium are thus somewhat contracted, there are still 4 per cent. left in which it can vary, which shows that opium, though one of our most valuable remedies, is a variable drug. That this new ruling in regard to the morphine strength in opium will cause any particular change or difference is very doubtful, for the reason that opium of the standard strength of the old revision, that is of 10 per cent. morphine value is such a poor quality in the market that it never has been used by pharmacists who are able to judge and analyze opium, and conscientious enough to buy drugs of best quality. Those men, it may be asserted, have always used an opium of such quality as the new revision requires, consequently there will be no change. Such pharmacists, however, who have never known nor cared about the quality of opium they have used, will hardly change their tactics now.

This change in the standard strength of opium, together with the increased proportion of the drug to the tincture under the new decimal system, has given rise to various widely different opinions about the comparative strength of the former tincture and the present. The two extremes appear to be on one side: the committee of revision, who, in the mentioned differential table gives the strength of the former 9 in 100, of the present 10 in 100, difference 10 per cent. On the other side, Dr. E. R. Squibb, who, in the *Ephemeris* of November, 1882, states, that the present tincture is 50 per cent. stronger than the former. Let us see. The former pharmacopœia directed to make 1 quart = 32 fl. ounces of tincture of $2\frac{1}{2}$ ounces of opium, that makes $37\frac{1}{2}$ grains in one fluid ounce of 480 minims, or 1 grain $12 = \frac{1}{2}$, or 8 in 100. Where the committee get their 9 in 100 is a mystery. The new tincture has 10 grains in 100, if we overlook the small difference caused by the specific gravity, by which there are 48 grains in 510 minims instead of in 480. According to these

figures 4 drops of the new tincture would be equal to 5 of the former, and physicians may feel pretty safe in such calculation. Doctor Squibb, in his estimate, gave the difference in the morphine strength too much consideration, and, for reasons stated above, is theoretically more right than practically.

The deodorized tincture—the wine—which formerly contained 1 grain in 8, the vinegar, which had 1 grain in 6, also the new preparation, tincture of ipecac and opium, or tincture of Dover's powder, have all now the same opium strength of 1 in 10, as Dover's powder always has had. Dover's powder is made with sugar of milk instead of sulphate potassa, which may occasionally be the cause of inquiry from people, who notice a difference in taste.

The arsenical solutions, liquor potassæ arsenitis and liquor acidi arseniosi have been advanced in strength from 4 grains in 1 ounce (480 minims) to 4 grains in 400, or 1 in 100; 5 drops of the present equal to 6 drops of the former.

The diluted mineral acids have suffered a change; in order to bring them to the decimal proportion, diluted hydrochloric acid had to be made stronger, diluted nitric acid had to be reduced, as is shown in the table; diluted nitro-hydrochloric acid, which the table does not mention, has been reduced from 25 in 100 to 19 in 100.

Extract of aconite, which was formerly made of the leaves, is now made of the root. Extract and tincture of conium are now made of the fruit or seed instead of the leaves, because of the superior strength of the substituted drugs. But we find nowhere an answer to the question: How much stronger are the new proportions than the former? How can physicians who have been prescribing extract of conium in full doses, know how much of the new will have the same effect as the old; if the new is much stronger, harm may be done if the pharmacist uses it, when the physician expects to have the old. What can the pharmacist do in such cases? If he has used up all the old extract, of course he prepares the new; perhaps he keeps both kinds, but how shall he know which to give? In this transitory period it would be advisable for physicians, when prescribing any of the remedies which have changed much in strength, to signify which

they intend to have. Very desirable it would have been, if the committee of revision, who undoubtedly had experimented and found the difference in the strength before they directed the change, had said something about the differential doses.

Among the additions the eye is met first with the new remedies: Abstracts, dry saccharated extracts of twice the strength of the crude drug and fluid extract, and about half the strength of the solid extract. They were adopted "because a demand had arisen for them," the committee says. Writer has some curiosity to know whence that demand came. The pharmacies keep already of those remedies, the crude drug, tincture, fluid extract, solid extract, and generally, also, the resinoid; what is to be done with the abstract? It is not to be presumed that physicians will commence to give their patients extracts in powder form at an age when medicines, much less objectionable to the taste, have to be covered with sugar or gelatine or given in sweet elixirs to be tolerated. It does not appear desirable to have the 75 per cent. of sugar of milk in ointments or suppositories, or in pills. In the latter it would increase the size unnecessarily, as so much inert matter, while the solid extract in combination with quinine or other powders acts not only as medicine, but also as vehicle to form the mass. An argument has been made in favor of the abstracts, viz: that the solid extracts in the market are to some extent made of the drugs, after the latter's exhaustion by tinctures or fluid extracts, consequently did not represent the medicinal value of the drugs. The reply to that would be, that no pharmacist should buy his extracts, he ought to make them, then he knows they are good, provided he makes them right, and whosoever does not make his own extracts will not make the abstracts, and the chances of being imposed upon by inferior preparations are the same. The only advantage apparent in the use of abstracts is a greater facility for the pharmacist to weigh 5 or 10 grains; that, however, seems hardly of sufficient importance to introduce a new series of medicines so nearly alike those already on hand.

A valuable addition is the compound powder of glycyrrhiza, which for a number of years past has gradually worked into the favor of practitioners. It originally was a sort of arcanum, com-

posed and used by a Doctor Kurella, who used it more for throat and pectoral troubles than as a laxative; later it was adopted by various European pharmacopœias, which, up to this date, give as a synonym, "*Pulvis pectoralis Kurellæ*." The new pharmacopœia in adjustment of the decimal proportions has increased the quantity of senna by 2 per cent., which seems very proper, as it is used here mostly for its laxative virtue.

The numerous additions are found in a table on pages 436 to 441. Many valuable remedies can be noticed there; some quite new; others not new, but now found worthy of a place in the pharmacopœia. One formula is in the book for—it is difficult to say what; it is not a remedy, not prescribed by physicians, and the majority of pharmacists would never use it, the *spiritus myrciæ* or artificial bay rum; it stands there with a solitary impropriety, and suggestion has been made that it either should have company by formulæ for artificial cognac and for communion wine, or should itself be banished.

Many of the profession were disappointed not to find in the new issue a number of formulæ for elixirs, a demand having arisen for them for a long time, the neglect of which severely injures the interests of both professions. There are a number of combinations which have proved valuable and which are constantly prescribed, but if the pharmacopœia gives no formulæ, by which the pharmacists can uniformly make them, their manufacture will be continued outside of the profession by a few parties, who will place them in the market like patent medicines.

The manufacturers introduce them to the public through the physicians, and in a short time the public obtains them everywhere without the assistance of the medical profession. There are many people now who buy their quinine, quinia, iron, strychnine pills and others at the wholesale houses. Elixirs likewise—and they may soon buy them in any grocery, if the indifference to the mutual interest continues. Some standard formulæ for combinations, mostly used, of elixirs, for a standard emulsion of cod liver oil, with which the physicians could combine anything they wish, would cause much improvement; the formulæ are known to most of the intelligent pharmacists, and all that is necessary to be done, is, to establish them as a standard for uniformity.

Since the pharmacopœia has not given any of these formulæ, it is to be hoped that the dispensaries or commentaries, which generally follow its new issues, will supply the want, and that the professions interested will, in such cases, recognize them as standard.

PRINCIPAL CHANGES AND DIFFERENCES IN THE STRENGTH OF PREPARATIONS
OF THE NEW AND OLD PHARMACOPŒIAS.

STRONGER IN THE NEW ISSUE.			WEAKER IN THE NEW ISSUE.		
	1870.	1880.		1870.	1880.
Acidum aceticum.....	35.	36.	Acetum lobeliæ.....	13.	10.
" " dilutum.....	4.5	6.	" opii.....	16.3	16.
" hydrochloric, dilut.	7.8	10.	" sanguinalis.....	13.	10.
" phosphoric, " 	9.8	10.	" scillæ.....	13.	10.
Alcohol dilutum.....	39.3	45.5	Acidum nitricum dilutum.....	11.6	10.
Confectio Sennæ.....	8.32	10.	" sulphuric, dilut.....	12.1	10.
Extractum aconiti.....	Leaf.	Root.	" sulphurosum.....	6.4	3.5
" coni.....	Leaf.	Seed.	Ferri et quiniæ citras (quinine)...	16.	12.
Liquor acidi arseniosi.....	0.87	1.	Liquor potassæ.....	5.8	5.
" ferri chloridi.....	35.	39.	Spiritus camphoræ.....	14.	10.
" potassæ arsenitis.....	0.87	1.	Tinctura aconiti.....	47.6	40.
Opium pulvis.....	10.	12.16	" aloes et myrrhæ.....	12	10.
Spiritus anisi.....	6.8	10.	" arnicæ.....	23.	20.
" cinnamomi.....	8.	10.	" colombæ.....	15.	10.
" juniperi.....	2.	3.	" cannabis indicæ.....	36.	20.
" lavandulæ.....	2.	3.	" cinchonæ.....	25.	20.
" menthæ piper.....	6.4	10.	" cubebæ.....	15.	10.
" menthæ viridis.....	6.4	10.	" gualiaci.....	23.	20.
" myristicæ.....	2.	3.	" ammoniatæ.....	23.	20.
Tinctura aloës.....	3.3	10.	" nucis vomicæ.....	3.5	2.
" assæfetidæ.....	16.	20.	" serpentariæ.....	15.	10.
" cantharidum.....	3.5	5.	" veratri viridis.....	55.	50.
" capsici.....	3.5	5.	" zingiberis.....	31.8	20.
" catechu compositi.....	7.	12.	Unguentum acidi carbolicæ.....	12.	10.
" coni.....	Leaf.	Seed.	" belladonnæ.....	12.	10.
" gauac.....	15.	20.	" gallæ.....	12.	10.
" humuli.....	17.5	20.	Vinum opii.....	13.	10.
" myrrhæ.....	12.	20.	" rhei.....	14.	10.
" opii.....	9.	10.			
" opii deodorata.....	9.	10.			
" quassie.....	6.	10.			
" rhei.....	10.	12.			
" valerianæ.....	15.	20.			
" valerianæ ammon.	15.	20.			
Unguentum acid. tannic.....	8.	10.			
" hydrargyr. ammoniat.....	8.	10.			
" hydrargyr. oxyd. flav.....	8.	10.			
" zinci oxydati.....	16.	20.			
Vinum ergotæ.....	12.5	15.			

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ARTICLE IV.

A COMPARATIVELY SAFE IF NOT NEW OPERATION FOR VARICOCELE.—By R. G. BOGUE, M.D., Chicago.

Fred. Horner, aged 11 years, a loose fibered, thin skinned lad, but not delicate, has had enlargement of the left side of the

scrotum for several years, which has gradually increased in size. The scrotal veins of left side are very large and tortuous and the skin of scrotum very thin; has for a long time worn a suspensory bag, which has afforded but little relief, and has not prevented the steady enlargement.

From considerations which will be given further on, I was led to decide upon the plan of operation adopted in this case, which to me is new. It may be an old and discarded operation, but from having given some thought to the subject of "radical cure operation" for varicocele, I believed that this operation contain elements of safety which none of the list of recognized operations for varicocele do not.

March 19, 1880, with the assistance of Dr. John Bartlett, and using the carbolated spray, I made an incision over the lower part of the cord and upper part of the scrotum, about one and a half inches in length, exposing the veins, and by use of an aneurism needle ligated the veins at four points with fine plaited silk ligature, which had been thoroughly carbolized, tied tightly and cut the ends close to the knot. I supposed that I tied two veins, each at two points, left a small drainage tube in the lower end of the wound and closed it with horse-hair sutures, covered the parts well with carbolated gauze and supported the whole scrotum with a pad between the thighs so that there should be no dragging upon the cord. On the second day the drainage tube was removed, and the sutures were removed on the second or third day following. The wound healed very kindly, without a drop of suppuration. The dressings were changed each day and the parts bathed or cleansed with carbolated water. There was left an indurated and tender mass, where the ligatures were, about the size of the last joint of the little finger. After two weeks the boy was allowed to be about; the scrotum supported by a suspensory bag. At first it seemed that little or nothing had been gained. The veins were as large and numerous in the scrotum below the point of ligature as before. But the tenderness and induration began to disappear, and finally the parts became entirely supple and the scrotum about one-half its former size. The ligatures could be felt as little hard bodies, but causing no annoyance. One or two veins could be followed along the cord.

On July 31, 1880, with the assistance of Doctors Bartlett, Parkes and Hooper, I cut down upon the veins at the point of previous operation, and applied three fine silk ligatures, two around one vein, about one-third to half an inch apart, and one about the other. The wound was closed and dressed as before, and it healed as kindly. The induration at point of ligation disappeared faster, leaving no veins to be felt in the scrotum, showing that all of the veins had been obliterated, and now, about four months after the second operation, the left side of the scrotum is no larger than the other; there are no large veins, and the testicle is firmer and larger than before the operation. The several ligatures can be felt as little firm bodies, but no tenderness about them. They have in this case proved to be entirely inoffensive to the tissues, having served the purpose for which they were used and then the tissues immediately about them not being irritated by their presence.

Radical cure for varicocele consists in destroying the main scrotal veins as blood channels. This has been accomplished by ligation in open wounds, by subcutaneous ligation with silk and metal, by compression with needles, pins and wires variously applied. By these methods the veins and all other tissues included within the appliance are to be cut through by ulceration. Another method is compression of the vessels by tying over the ends of needles thrust through beneath them. The needles and ligatures are left in place until sufficient inflammation has been provoked to obliterate the veins. Whether this is uniformly accomplished, or whether attended by any unpleasant or unfortunate results, I am unable to say. Another operation which has been resorted to is that of cutting away a goodly portion of the skin of the scrotum, that by such retrenchment the scrotal contents should be held up, a kind of substitute for a suspensory bag.

Most, if not all, of these methods have been and are still considered dangerous operations. Dangerous to the patient from gangrene, suppurative phlebitis, septicæmia and pyæmia.

Deaths from these have happened often enough to lead most of the authors to be very chary in recommending radical cure operation, if it can be avoided. One says "Don't operate unless

the patient urges it upon the surgeon." Operation for varicocele has been known to be dangerous to the surgeon, for Delpeck, a famous French surgeon, was assassinated by a man on whom he had operated for varicocele of both sides, the man believing that the operation was the cause of his loss of sexual desire. The particular operation in this case is not mentioned.

It is proper to inquire into the causes of danger in this operation. Does it depend upon some peculiarity of the structures operated upon, or is the suppurative inflammation or gangrene, with its septicæmia and perhaps pyæmia due to the kind of operation resorted to, or in other words, is it due to the manner in which the veins and the neighboring tissues have been treated?

Operation upon large veins in their continuity, has been considered more or less dangerous; but they give no special anxiety when encountered in an open wound. Under such circumstances they are either left to themselves, or if inclined to bleed, are ligated either one end or both, as the case may suggest, the wound of the vein, or the ligation thereof, seldom being accused as the cause of any untoward results which may follow. As to the parts implicated and the operation under consideration, we are inclined to believe that the fault lies in the kind of operation, instead of any peculiarity of the parts. The parts are peculiar, for the contents of the scrotum receive their blood supply by a limited number of long slender arteries, and the blood is returned by only a few long veins, and it is an easy matter to cut off nearly all the supply of blood and also prevent almost wholly the return flow. And really this is what is accomplished by the operation, which has the endorsement of all the authorities.

A needle is thrust through at a point selected in the very upper part of the scrotum, or lower part of the cord in front of the vas deferens and behind the veins, hoping to leave the arteries also behind the needle; another needle is to be passed in front of the veins, and by means of wires attached to the needles to hold them in apposition, they are rolled and in this way the parts included are to be compressed by twisting, or a ligature of silk or wire is to be passed through in the place of the needles and the tissues included strangulated by tying or twisting, or by

means of a needle behind and a ligature tied over the ends, all of the tissues in front and a portion of skin are included in the strangulation. Now what has been included within the strangulating appliance besides the enlarged veins which are alone the offending bodies? Nearly everything making up the cord at point of operation except the vas deferens; nearly all of the vessels for supply, nearly all the channels of return; the connective tissue, fascia, cremaster and nerve filaments. By strangulating this mass, the parts beyond are certainly put into about as favorable condition for sloughing as could well be done, excepting the old rude way of treating bucks, which was by tying the whole appendage at the top of the scrotum. Gangrene is as likely to follow the sudden arrest of flow of venous blood from a part as to cut off the supply of arterial blood, particularly so in a distant and dependent part. We are disposed to believe that there is safety in cutting off the channels of blood return, not all at once, but by two operations. If there are three or four enlarged veins, cut down upon them at the upper part of the scrotum; expose and ligate separately each vein, leaving at least one. I think it full better to ligate them at two points, half an inch or so apart; by so doing, a section of the vein will be obliterated. In this way, all of the venous flow is not arrested, only the major portion. Some inflammation will follow, but the parts beyond are not endangered. While recovery from this operation is going on, there will be established collateral circulation sufficient to allow a second operation, ligation of the remaining enlarged vein or veins, with equal safety. The second operation should not be made until all induration from the first has disappeared. And, if the operations are made with the antiseptic precautions, and thus treated, I believe that all of the special dangers attending radical cure operation for varicocele are done away with. Certainly, if there is danger, it is the minimum amount, and with less suffering than by any other operation. Catgut ligatures would, no doubt, answer just as well as silk.

I operated upon a case, several years ago, where the scrotum was much elongated, the skin thin, the veins large, and the patient an adult, by what is called the Henry Lee plan, which consists in subcutaneous ligation of the veins at two points, about one inch

apart, and subcutaneous division of them between the ligatures. It was followed by gangrene and sloughing of the testicle and scrotum of that side, and an attack of septicæmia, which, for a few days, endangered the life of the patient. From the loss of tissue and cicatrization there was thorough retrenchment, and the man had no more pendulous scrotum to annoy him; but it was secured at no little risk.

This case led me to examine the subject, to see whether there might not be found some operation which would be less likely to endanger the parts, and, we believe, that the operation herein advised, to be more reasonable and less dangerous than any other, for only the veins are ligated, leaving all the other structures uninjured, the flow of blood to the parts not interfered with, and the venous flow not wholly arrested at one time; all of which must tend to secure the minimum amount of injury and risk.

ARTICLE V.

CASE OF COMPLETE VERTICAL DISLOCATION OF THE PATELLA.

By CHARLES T. PARKES, M.D.

In September, 1882, Dr. C. W. Johnson requested me to see a patient who had been injured about the knee some two hours previous to his call. The doctor had already diagnosed a vertical dislocation of the patella. Upon reaching the patient the following history was elucidated. The man, in attempting to get on to his coal wagon, of which he was driver, made a mis-step and fell to the ground with his knee in the bent position. In falling, he struck his right knee against a large piece of coal. Immediately he found he was unable to bend or extend his limb and any attempt to do so was accompanied with terrible pain. Dr. Johnson was called, examined the man, and had him sent to his home.

We found the patient in much pain, with the leg very slightly flexed and fixed in that position. The knee-joint was much broadened anteriorly and the trochlear surface of the lower end of the femur was easily mapped out beneath the stretched integu-

ment. To its outer side was a very prominent elevation made of the patella lying in a vertical position and resting upon its inner edge, so that its subcutaneous surface was turned inwards and its articular surface outwards, both of which could be traced beneath the integument.

Diagnosis, a complete outward vertical dislocation of the patella—a half revolution on its longitudinal axis with the inner edge turned downwards and outwards.

The bone was rigidly fixed in its abnormal situation, allowing of no change in its position; the obstacle to motion consisting in the tense condition of the fascia lata and ligamentum patellæ. The patient was anæsthetized and the reduction attempted. Dr. Johnson flexed the thigh upon the abdomen and extended the leg, both positions being carried to the fullest extreme. I then attempted, by lateral pressure in the opposite direction upon the edges of the patella, to replace it. Several efforts ended in failure, the bone being still held fast by its fibrous attachments. By flexing the leg strongly, I found that the now anterior edge of the bone was drawn outwards in the direction of its normal situation, and the vertical position of the bone altered somewhat. I then directed Dr. Johnson to flex the leg as strongly as he could, and to be ready to extend it suddenly as soon as I gave the word.

After flexion was as complete as it could be made, I placed the end of my pocket knife against the inner (now lower) edge of the bone, pushing against it inwards and forwards, so as to increase the outward inclination of the bone produced by the flexion, and at the same time to raise this edge above the outer rim of the trochlear facet of the femur. As soon as I felt this object was accomplished, sudden extension of the leg was made and the displaced bone slid quietly into its proper position. Hot fomentations were directed to be applied to the joint constantly. The young man remained in bed four days and returned to his work inside of two weeks. There was no troublesome effusion, inflammation or tenderness of the joint following the accident. The patient was a man 20 years old, very tall for his age, rather slender and had large lower joints.

REMARKS.

Vertical dislocations of the patella are acknowledged by all writers to be of rare and unusual occurrence; indeed the time has not long passed since it was considered, by noted surgical men and authors, to be an impossible accident.

Of the twenty or more cases I have been enabled to refer to, none of them are described as being as complete as the one coming under my care. In the recorded cases, the edge of the patella rested in the depression separating the facets of the trochlear surface of the femur, and this position is given as the normal situation of the bone in vertical dislocations by Professor Agnew in his "Surgery," p. 109, Vol. II. In the case now reported, the inner edge of the patella was thrown entirely external, clearing the femoral articular surface absolutely, and rested against the outer tuberosity of the external condyle of the femur, so that the *inner* border of the displaced bone was fully half an inch behind the highest point of the outer rim of the trochlear facet of the femur. Except during voluntary movements of the limb or during passive efforts of flexion or extension, there was no unusual contraction of the quadriceps extensor muscle, it was flaccid and slightly movable laterally. The ligamentum patellæ was very tense, and so also in a remarkable degree was the ileo-tibial band of the fascia lata throughout its entire length. Certainly nothing would have been added to the ease of reduction by a division of the quadriceps tendon—a procedure resorted to in some of the failures to reduce by manipulation. I am convinced that complete anæsthesia banishes all obstacles to a reduction of the displacement, mainly because it does away with the powerful involuntary muscular contractions which accompany the excruciating pain attending even the slightest movements with the bone in its abnormal position. Prolonged or harsh or even mild efforts at reduction without its use are unwarrantable, not only because the coincident muscular spasm render them useless to accomplish any other result than agony to the sufferer, but because such efforts may produce a rent in the fibrous casule of the bone and joint or increase the size of such opening already made by the accident, thus enhancing the liability to effusion into the

joint or to dangerous inflammation thereof. Furthermore, the patella may be forced into the opening to such a degree, and held by it so firmly as to make the reduction next to impossible, a condition supposed to have been present in reported cases, which have been left unreduced after many efforts to accomplish it had ended in failure.

The patient should be moved carefully, should be cautioned against any movements whatever of the injured limb; the surgeon should avoid handling the limb beyond the touch and glance which makes the diagnosis, until the patient is fully anæsthetized.

The contour of the bony surfaces concerned in the accident, the normal looseness of the soft parts surrounding and attached to the patella, especially in the extended position of the leg, are such as to make it impossible for anything in or about them to become an insurmountable obstacle to reduction; so that I feel justified in saying such difficulties, when present, arise from muscular spasms and the possible changes in the fibrous investments of the bone, perhaps due to the injury—oftener perhaps dependent upon rough and unnecessary manipulations.

ARTICLE VI.

LADY PHYSICIANS.

At the banquet of The Alumni Association of the Women's Medical College, Prof. E. Fletcher Ingals responded to the toast, "*The Profession*," in the following strain, which will represent the status of lady physicians in the West:

Within a few years, there has been a great change in the feeling of the profession toward lady physicians. This is nowhere more clearly shown than by action of different medical societies of this city, of the Illinois State Medical Society, and of the American Medical Association, all of which have admitted ladies to full membership.

This is due in part to the ladies themselves, but also to the institutions from which they are graduated.

A few years ago, women, with the peculiarities of Dr. Mary Walker, were attempting to crowd themselves, not only into the profession of medicine, but into all of the professions and arts, where formerly only men had been employed. This was done at the expense of those traits which have always been considered as the peculiar glory of womanhood; and, as a result, gentlemen in and out of the profession, saw in the effort only a tendency to the degradation of the gentler sex, and many would rather have followed their sisters to the grave, than to have seen them so associated with these strong-minded women. But, the ladies, who are active in the profession and who are now studying, do not countenance these methods, and hence a great change has come; however, much of this change, particularly in the West, is due to the institution in whose honor we are convened here to-night.

However great the objections may be to the study of medicine by ladies in mixed classes, and I, for one, think these objections have not been overrated, there can be no possible objection to its study in institutions like the college you call Alma Mater.

In entering this institution, a lady sacrifices nothing of her delicacy, modesty or self-respect, but takes a position parallel with that of her brother in any of the best colleges of the country.

The profession and the public appreciate this, and gladly extend the hand to the lady physician, which a few years since they would have withheld from the *female doctor*.

I predict, that when the objectionable features, which still remain in our larger hospitals, can be removed; when the fact, which was long ago accepted by the foremost colleges of the country, and which has been recently acted upon by the more advanced Homœopathic colleges—namely, that mixed classes are not good, shall be universally accepted, then the last lingering prejudices will disappear, and, then, ladies will take an equal position with their brothers in the great work of ministering to the sick.

The profession already welcome the graduates of this college, as they do gentlemen from other institutions of high grade; but it is still necessary for a lady physician to tell where she graduated, when she receives an introduction.

It is often urged that lady physicians cannot endure the hardships, which must be borne by general practitioners, and this is probably true, but this is only one of the misfortunes which will render your success the more conspicuous.

However, the profession is broad, and those who find themselves unable to endure the hardships of general practice, may after a few years settle into some of the specialties into which the practice of medicine is divided. But none, I hope, will attempt to practice any of the ordinary specialties, until they have had several years experience in general practice, for without such an experience no one is competent to enter a special field, unless I except two of the specialties which are now taught in this institution.

I refer to Pharmacy and Dentistry. The former is not recognized as a specialty of medicine, but it should be, and there is nothing about it which the competent lady physician cannot attend to.

The latter has but recently been acknowledged as one of the proper specialties of medicine. It opens a large and profitable field for usefulness for any of our graduates, who have not the physical ability to endure general practice, or who prefer to concentrate their work upon a single line, in order that they may do that the better.

In conclusion, placing myself, for the moment, outside of the Faculty and speaking for medical men at large, I welcome the graduates of this college, and of similar institutions, to all the honors and emoluments of the profession.

ARTICLE VII.

SUPPURATIVE OTITIS MEDIA, PYÆMIA. A case occurring in Cook County Hospital, in the service of Dr. Henrotin. Reported for the CHICAGO MEDICAL JOURNAL AND EXAMINER, by Dr. EDWARD PARKER DAVIS.

Cases of this character are sufficiently frequent to be familiar to the practitioner; the fatal termination, in this instance, and

the opportunity for post mortem examination, attach more than usual interest to the present case. The patient, M. C., female, aged 34, a domestic and native of England, was admitted during the month of February, 1883. She complained of pain in her left ear and the left side of her head, face and neck; deglutition was also very painful. She described her illness as having lasted for five days before admission, during which time she had had chills and profuse perspiration, fever and emesis, with sore throat; her illness began with an ear ache on the left side; some years before, she had an abscess or "boil" in the left ear.

On examination, marked and general icterus is observed, tongue coated dark brown; tenderness in the epigastrium; the liver extending an inch lower than normally. The patient's general nutrition was good; her skin dry and hot; pulse 114, temperature 104.

Chills at various intervals followed the patient's admission, the temperature rising to 105; profuse perspiration, dry tongue, emesis and great debility were observed. Subcrepitant râles were heard at the base of the right lung; pain and tenderness in right hypochondrium. From the time of admission, patient had complained of pain in the left ear, a purulent discharge was noticed, the external meatus was swollen, and difficulty was experienced in gaining access to the middle ear.

Antipyretic and supporting treatment was unsuccessful; the ear was cleansed with carbolized solutions and filled with iodoform, but without avail; the patient dying comatose nine days after admission.

Post mortem examination, as follows:

Seventy-two hours after death, rigor mortis absent; surface of body icteric, a greenish discoloration occupied the posterior triangle of the neck, upon the left side.

Thorax, recent adhesions and 3ij of serous fluid in the left pleural cavity. Infarctions in both lungs generally disseminated.

Right heart full of dark clotted blood, heart normal, valves competent, abdominal viscera normal, excepting the left kidney, on which the capsule was adherent. Mucous membrane of the bladder covered with pus. In the cranium, between the dura mater and the bones, was found several ounces of pus in the

posterior fossa; at the base of the petrous bone was a carious sinus leading to the middle ear which was found to be enclosed by carious walls and filled with sanious pus.

The middle ear was lined with pus and its walls were carious. Making its exit at the jugular foramen, pus had followed the carotid sheath, separating the artery and vein, and passing to the clavicle; a pus sheath of thickened tissue was found exterior to the internal jugular vein.

The mastoid cells were carious and infiltrated with pus.

The cerebrum was not abnormal.

The posterior portion of the left lobe of cerebellum was softened and discolored, apparently from the pressure of the subjacent pus.

For the twelve years ending in '76 eighty-nine cases of neglected otorrhoea which resulted in death, serious exfoliation of bone, or necessitated a severe operation, are cited by a single writer on diseases of the ear (Burnett). Observers of the hospital and dispensary cases are familiar with the appearance of the disease at its earlier stages. The case will suggest to the general practitioner, the importance of an early diagnosis before the suppurative process has become chronic; the operating surgeon will be urged to undertake operative procedure that the advantages of drainage and disinfectants may be secured before intra-cranial perforation has taken place.

COOK COUNTY HOSPITAL.

ARTICLE VIII.

TWO CASES OF STENOSIS UTERI WITH SYMPTOMS OF LOCOMOTOR ATAXY. By O. STROINSKI, M.D.

I. Mrs. M. N., a rather strong woman, fifty-two years of age, was carried to my office with the assistance of two persons. She had always been a healthy person but had borne no children. Three years ago, and one year after the menopause, she noticed rheumatoid pains in the right lower limb, which also attacked the other lower extremity. After a while there was added to

that a sensation of cold and numbness is the same regions ; and she often could not distinguish which was the right and which was the left leg. Then she had a sensation of whirling around when awakening in the morning and when leaving the bed she would be unable to stand upon her feet for a quarter of an hour. Urinary trouble also set in and the sphincter ani gave away temporarily. Later, the pains in the lower extremities increased and they attacked the forearms and the hands. Pains in the groins appeared and the walk was gliding. All the symptoms of locomotor ataxy had now gradually developed, but vision was unimpaired and ophthalmoscopic examination showed the retina to be perfectly normal. The galvanic current acted well on the several affected groups of muscles, and Westphal's knee phenomenon could not be elicited. The latter symptoms, in connection with the healthy and stout appearance of the woman induced me to examine the genital tract. The ovaries were not palpable and the parts adjacent to the uterus showed no irregularities. The cervix uteri was completely occluded by agglutination of the walls of the cervix and it was impossible to enter the cavity with the uterine sound even by increased pressure. I therefore perforated the cervix with a small trocar and after dilating the same with laminaria tents, introduced a common intra-uterine pessary. After six weeks the phenomena of locomotor disturbance began to disappear and micturition was normal. Afterward it was necessary to apply the intra-uterine stem every three or four months, the labia of the cervix inclining to agglutinate again.

II. I was called to see Mrs. Anna W., fifty-three years of age, who had been unable to leave her bed for the last three months. Four years ago and about one year and a half after the menopause, she noticed the same pains as above described, and the course of the disease was similar to that of Mrs. N. But here the sphincter ani was more involved, and she lost all power of motion. There was also constant constipation caused by partial paralysis of the bowels ; and for the last four months she had to make injections with large quantities of water to induce defecation. Anæsthesia was complete in the lower extremities and the galvanic current acted but slowly on the muscles, especially on the gluteus maximus and biceps. The pulse was 50, and the

action of the heart retarded. The sphincter ani could be passed by two fingers without producing any pain, and there was no difficulty in introducing a large sized bougie into the bladder. The cervix was closed as in the first case, and it was treated in the same manner. Improvement was more rapid in this case and the woman was able to do her house work after two months.

These cases are very rare and they are mostly diagnosed as locomotor ataxy, but they are known to exist by every gynaecologist. The pathological condition of these cases has never been examined and it has been hitherto impossible to decide as to the symptoms produced, especially in those cases where the uterus is no longer irritated by the monthly ripening of the ova. It is probable that pressure on the uterine nerves caused by the agglutination of the uterine walls acts reciprocally, on the nervous system of the abdominal part of the body and on that of the spinal cord.

THE BACILLUS OF GLANDERS.

The President of the Imperial Board of Health, Dr. Struck, at Berlin, publishes the results of experiments made on glanders. The material was taken from nodules in the diseased mucous membrane of horses which had died from the disease. Sections of these nodules were colored with a saturated solution of methylene-blue, washed with diluted acetic acid, bathed in alcohol, and then imbedded in cedar oil. There were small bacilli, which were cultivated in horse blood. The products of these cultures, injected hypodermically into several parts of mice, rabbits and guinea pigs, produced a disease which showed all the symptoms of glanders, such as swelling of the testicles and ovaries, with ulcerative processes in the nasal cavities, and general infection, with final death. Injections with material derived from these animals had also always produced the same results.—*Wiener Med. Wochenschrift*.

College Commencement Exercises.

ARTICLE IX.

RUSH COLLEGE.

The annual commencement exercises, of the forty-first year of this institution, were held in Central Music Hall on the 20th of February, at 2 o'clock P. M.

President Allen, in introducing the exercises of the day, referred to the fact that Rush College, having been chartered by the legislature 1837, was older than any other educational institution in Illinois. This was the close of its fortieth year of college work, and the occasion was signalized by the executive Faculty appearing in the traditional scholars robes of the ancient University of London, which had been adopted as the garb and insignia in which the Faculty would appear on all public occasions of the college.

Rev. Clinton Locke, D.D., offered prayer.

The president conferred the degree of *Doctor of Medicine* on one hundred and seventy-nine (179) gentlemen of the graduating class.

Dr. E. H. Van Patten, of the class, delivered a brief and very able valedictory.

Prof. Moses Gunn, M.D., LL.D., delivered the Doctorate address. (This address is printed in full in this number of the JOURNAL AND EXAMINER, and will be commented on next month.)

A large and cultivated audience was present, including many visiting alumni and many representatives of the local profession.

In the evening, the Faculty entertained the alumni of the college, and other invited guests, at a banquet at the Grand Pacific

Hotel. Over three hundred and fifty partook of the pleasures of an elaborate and comforting menu and of the still more enjoyable feast that followed it.

Prof. H. M. Lyman presided, and grace was said by Rev. T. E. Green.

The toast, "*Our Guests*," was responded to by Prof. J. N. Hyde, who uttered in eloquent words the welcome of the Faculty to the assembled company.

"*The Specialist*," was responded to by Dr. Horace Wardner, superintendent of the Insane Hospital at Anna, in a well-studied effort, which he read from manuscript. It was a masterful exposition of the true relations of the medical specialist, and was most heartily enjoyed by the company.

Gardner G. Willard, Esq., spoke "*As the Lawyers Look at Us*," in a finished and entertaining speech. We never knew before how much the two professions had in common, nor how great a bond of sympathy ought to exist between them.

Rev. Thos. E. Green spoke of "*Our Common Theme*" in a manner so eloquent, and in every way so well, that the company was fairly electrified by the effort.

A solid and much appreciated response to the toast, "*The Consultation*," was made by Dr. S. H. Birney, of Chanpaign.

Prof. J. Suydam Knox made a response to the sentiment, "*Quacks and Quackery*," which, for humor, fairly entitles him to be regarded as the humorist of the profession. His speech did as much for the digestion of the dinner that had just been eaten as wine could have done, and it was enjoyed much more.

Dr. J. B. Hench, of the class of '83, spoke to the interrogative sentiment, "*What Next?*" in a six minute speech replete with good sense, and set in such chaste English, and delivered with such grace of quiet dignity, as to elicit the plaudits of all present.

President Allen made the last speech of the evening, the sentiment being "*Predicaments*." It was felicitous, as such efforts on his part always are, and was a fitting finale to a galaxy of the most excellent after-dinner speeches that it has been our fortune to hear, on a single occasion, in many years.

Not a little of the enjoyment of the occasion was due to some excellent music rendered by a student and two alumni of this

college, Messrs. Snyder, Davis and Bradley. They rendered a humorous duet, as follows :

A MODERN CONSULTATION.

Music—"Merry Maiden and Tar."—*Pinafore*.

- DOCTOR. You tell me you've an ill-defined sensation.
- PATIENT. Oh wise and learned doctor that you are!
- DOCTOR. Connected with excessive cerebation.
- PATIENT. Oh wonderful diviner that you are!
- BOTH. Oh excessive cerebation;
Oh ill-defined sensation;
Oh wonderful diviner that you are!
- DOCTOR. You're the victim of a mild hallucination,
- PATIENT. You astonish me with such prodigious lore!
- DOCTOR. And you have a growing inco-ordination.
- PATIENT. Well, really, have I any trifle more?
- BOTH. Oh the mild hallucination!
The inco-ordination, the bright irradiation,
Of such scientific lore!
- DOCTOR. The cortex of your frontal convolutions
I will now proceed to thoroughly explore;
And at once I reach intelligent conclusions—
How sad! your days of happiness are o'er.
- BOTH. Those frontal convolutions, intelligent conclusions.
- PATIENT. Oh melancholy tidings!
That my happiness is o'er.
- DOCTOR. You are suffering from the gradual invasion
Of a fatal and insinuating spore,
Whose inevitable, cruel termination,
Is that you will surely come to be a bore.
- PATIENT. Oh, doctor! you alarm me!
How really can it harm me?
And can you not forearm me
Against this deadly spore?
- DOCTOR. You will shortly feel your cranium expanding,
And great will be the size which it attains;
And your knowledge will be ever so commanding
That not a thing unknown to you remains;

In your ear you'll have a flea,
In you bonnet then a bee,
And the "big head" is the title of this malady.

DOCTOR. 'Tis the work of the bacillus cerebrosus.

PATIENT. Why, doctor! seems to me I've heard of that.

DOCTOR. And the way to antisepticize the creature
Is for you to wear a brick within your hat.

BOTH. The bacillus cerebrosus,
Bacillus cerebrosus,
This very night we'll put a brick within our hats!

—DR. E. P. DAVIS.

The Alumni Association of the college held its annual meeting the morning of the 20th.

The committee on Prize Essay reported that two essays had been presented, but that neither was worthy of the prize. The same prize was continued for another year. The Association voted a donation of fifty dollars to the sufferers by the recent disaster to the mine at Braidwood.

The officers elected for the ensuing year were as follows: President, Dr. John Guerin, of Chicago; first vice-president, Dr. T. P. Russell, of Oshkosh; second vice-president, Dr. J. W. Fisher, of Milwaukee; secretary and treasurer, Dr. F. A. Emmons, of Chicago; executive committee, Drs. Maynard, Davis, and Bevan, of Chicago; prize essay committee, Drs. C. E. Parkes, C. T. Fenn, and J. S. Knox.

ARTICLE X.

WOMAN'S MEDICAL COLLEGE.

The thirteenth annual commencement exercises of the Chicago Woman's Medical college were held February 13, at Hershey hall, in the presence of an overflowing house of friends of the young doctors. The exercises began promptly at 8 o'clock with an organ solo by Prof. Falk, succeeded by a short prayer by Rev. Samuel Fallows. Prof. William H. Byford, president of the col-

lege, then, in a few fitting words, presented diplomas and certificates to the following eighteen ladies, graduates of the class of 1883:

Mary Augusta Brown, Sarah Keyport Cummings, A.M., Elizabeth H. Cassell, Fannie Dickinson, Frank A. Groat, Elizabeth Sanders Holton, Laura North Hyde, Rebecca Alice Hartwell, Sophronia McCloud Lane, Virginia Mahoney, Julia Catherine Peffer, Georgia Sackett Ruggles, Charity Ann Saunders, Farima J. Shipp, Alice Summerfield, Avice Elida Smith, Mary A. White, Isabella Smith White, B. S.

The class valedictory address was read by Miss Virginia Mahoney. It was a clear, forcible effort, with but a moderate dash of the sentiment which generally adorns such farewell occasions. Miss Mahony gave a short review of the progress of medicine since the time of Æsculapius to the latter half of the nineteenth century. For the near future she predicted far greater and more brilliant advancement. Attention was called to the fact that the Chicago Woman's Medical college was the first of its kind in the West. The farewell to faculty and to the class was brief but well expressed.

Some of the class will go east, some north, and some as far west as China.

The regular faculty address was pronounced by Prof. Wadsworth as follows:

To provide for bodily comfort, to insure the soul's future happiness, and to attain knowledge are among the greater incentives to worldly industry. Now whatever may be the eccentricities of any one individual in these several directions the general development of the human mind is quite symmetrical. No one goes far ahead of the common understanding and maintains himself systematically. Science is classified knowledge. We can go back to pre-scientific as to pre-historic times when the general attainment of knowledge did not admit of classification in groups as at present, and if we observe the practice of medicine during these periods we shall see that there were few reasons or consistencies; but we have advanced and attained a considerable degree of knowledge in many directions. These remarks are made merely as a prelude to the subject around which our thoughts are to be

gathered for this occasion, namely, the Principles and Practice of Medicine, minus or plus Physiology, and I define physiology as the science of essential organic movements with reference to functions. Æsculapius, the reputed son of Apollo, practiced more in surgery than in medicine, with very little knowledge of either and none whatever of physiology. Hippocrates hypothicated as "humors," blood, phlegm, yellow bile and black bile. He located blood in the heart, phlegm in the head, yellow bile in the liver, and black bile in the spleen and theorized that a surplus or disturbance of these "humors" caused all bodily ills; consequently bleeding and purging were his principal means of cure. Galen was an advocate of Hippocratic views. He believed that inflammation was the result of blood entering new areas of flesh; that when this was uncomplicated, it produced œdematoid disease; when accompanied by phlegm it produced phlegmonoid; by yellow bile erysipelatoid; by black bile schirrous disease, etc.

Upon these vague hypotheses he subjected his patients to the most rigorous confinement in heated and unventilated rooms to *sweat out* the offending humors. We need not discard him. He was wise for his time but he had not the slightest knowledge of physiological processes. In the sixteenth century Paracelsus, a person of some acquirement of chemical knowledge, and who first introduced chemical remedies into medicines, declared that the human body was composed of mercury, sulphur and salt, and that in these substances all bodily disease had its origin. Mercury, as a volatile substance, gave rise to frenzy, madness, delerium etc.; sulphur produced fever, phlegmons, jaundice, etc.; while salts generated colic, stone gravel, gout and sciatica. His principal remedy was antimony, the physiological action of which he never even surmised.

The seventeenth century seems to be the earliest period in which observers contributed substantial material for a basis for physiological medicine. Harvey discovered the circulation of the blood, Malpighi extended his observations microscopically, and Bartholin, Steno, Wharton, Sylvius, Willis, Spigelius, Glisson, Peyer, De Graaf, Schneider and others did valuable service to science. During this period, however, medical practice was

carried on upon the wildest hypotheses, and for the most part enshrouded in overpowering superstition. Nature had no province whatever. Sick bodies were cured by means as extrinsic and mysterious as those which saved souls, and the incentive to independent inquiry by the few was held in check by the unreasoning ignorance of the many.

Pertinent to this subject the introduction at this time of inductive philosophy by Bacon aided greatly in preparing the general mind for the investigations and conclusions necessary to rational medicine. Early in the eighteenth century Stahl propounded the doctrine that the rational soul of man governs the whole bodily economy. That what we term the *vis medicatrix naturæ* was in reality the soul making resistance to bodily disturbances. Upon this hypothesis was based strenuous opposition to "strong medicine," and vigorous measures in treatment were decried by all adherents to the new doctrine. Antimony, opium, Peruvian bark, bleeding, purging, emetics etc., were discarded generally and expectation and timidity became characteristic. Immediately following the introduction of these views homœopathy with its *similia similibus curantur* and minimum dose list was introduced. The classic 10 and 10 divided into unthinkable attenuations making less disturbance in the body enhanced its favor with the soul and therethrough wrought wonderful cures minus physiological considerations.

During this century Haller discovered the property of the irritability in muscles and nerves, which gave a nucleus for new speculation and disjointed theories. Applied pathologically, disease was accounted to consist of spasm or debility. Every body sick was either sthenic or asthenic and therefore must be bled or stimulated. From this time on discoveries on physiological anatomy were frequent and important, but not until the beginning of the nineteenth century was there any one to conceive the idea of association in the theory and treatment of disease. Every theory based upon isolated facts or observation was run to its extreme, and the utmost confusion and contradiction of statement obtained. And who wonders? At present we have attained a much greater degree of physiological knowledge. Neither the investigations nor their achievements need be enumerated here.

Every medicine necessary to use has its physiological and therapeutical effect outlined, and none should be administered without an understanding of what is to be expected therefrom. And yet it must be said physiological considerations do not enter into the general practice of medicine as a ruling factor. The science, in its relation to principle and practice, is neither sufficiently taught nor comprehended, and the common people have not the slightest conception of such an idea. It is hardly an exaggeration to say that a thousand barrels of stuff in the form of patent medicine are swallowed annually by the people of Chicago at their own option, or on the advice of some friend. It was, in ancient times, the custom to expose the sick in public places and allow passers by to prescribe for them. The custom is modified but not much abated, and physicians are pestered by ignorant interference with their best remedial plans. As a matter of course legal medicine is not much in advance of common appreciation. In this State a person can legally practice medicine who has practiced ten years without medical education. One of these legalized doctors after attending a case of *dyssentery* (as he pronounced it) for two days, without a cure, prescribed peppermint water as his ultimatum of physiological medicine. Now should an intelligent M. D. enter protest against this doctor's practice he would be adjudged as jealous of his peer (legally), and the ignoramus would find plenty to support him.

The progress of medical science must, to a certain extent, be subservient to the common intelligence; but its advancement, nevertheless, must be achieved by persistent systematic research. Many suppose that medical sects, by rivalry, promote the interests of medicine; that homœopathy has modified regular medicine, abated bleeding, purging and heroic doses, and that eclecticism has abated the use of calomel. They have not, any more than the fly upon the wheel hub has turned the wheel, or the moonlight musings of lovesick boys and girls have advanced the science of astronomy. Sects are the incidents of an imperfect conception or the perversion of fundamental principles. Great advancements are continually being made independent of them and in spite of them, and they are left behind with their own littleness.

The principles and practice of medicine *plus* physiology should

be comprehended generally by practitioners, for the unphysiological practice of medicine is too nearly related to quackery, and in these days there should be no excuse for differences in this respect. Member of this class, remember thy physiology in the days of thy youth that thy patients may live long in the land.

The music of the evening was furnished by the Chicago female quartette. The floral presents made to the eighteen graduating young ladies were very numerous and beautiful.

ARTICLE XI.

COLLEGE OF PHYSICIANS AND SURGEONS.

The first annual commencement of the College of Physicians and Surgeons of Chicago was held in the afternoon, at Central Music Hall. The attendance was quite large, and the exercises proved interesting. A fine orchestra was present and furnished some excellent music. Considering the fact that the college has completed only its first season, the number of graduates—fifty-two—speaks well for the estimation in which the Faculty is held. The members of the Faculty were all seated upon the stage, and are as follows: Profs. Bockius, Jelks, Hoadley, French, Harlan, McCoy, Silon, Gibson, MacWilliams, John, Harper, Angear, Carpenter, King, Holroyd, Waxham, Earle, Kea, Curtis, Palmer, St. John, Steele, Jackson and Powers. The exercises were opened with prayer by the Rev. Dr. Abbot E. Kittredge, of the Third Presbyterian church. After the prayer, Dr. D. A. K. Steele, secretary of the college, presented the first annual report. The college has been in existence less than two years, but during that short time it has made an enviable reputation. The first steps toward founding the college were taken by Prof. Earle, who spoke of the matter to Dr. A. Reeves Jackson. A preliminary meeting of the founders was held at the Grand Pacific hotel, May 4, 1881, and on July 2 letters of incorporation were obtained. The final certificate of incorporation was received Oct. 14, 1881, and in September of the next year the college was opened to students, and the first lecture course began in one of the finest

and best appointed medical college buildings in the West. The session just closed was attended by 165 students, 52 of whom graduated yesterday.

When the secretary had finished reading his report, Dr. Jackson, President of the college, presented the diplomas, the graduates walking upon the stage in sections and receiving their passports into the field of medicine. In presenting the diplomas, Dr. Jackson said: "By virtue of the authority vested in me by the board of trustees of the College of Physicians and Surgeons of Chicago, I confer upon each of you the degree of Doctor of Medicine. I present this diploma in testimony of your conduct in having obeyed the rules and regulations of the college."

The graduates resumed their seats, and Dr. Jackson, addressing them feelingly, said:

"GENTLEMEN: You are the first-born of our house, and we feel the same interest in you that parents do in their first children. We have to-day publicly acknowledged you as our offspring, and we hope you will prove worthy of your parentage. This diploma is presented as a badge of your ancestry, and we trust you will never do aught to lessen the confidence we have placed in you. May God bless you in whatever you do for the right."

A number of the students were then made the recipients of floral remembrances from their lady friends. The orchestra rendered selections from the "Mascotte" and the class valedictorian, Dr. Orin P. Maxson, M.D., L.L.B., of Waukegan, was then introduced. Dr. Maxson delivered an eloquent farewell to his fellow-students and the Faculty, and paid a high tribute to the profession he now enters upon. He gave a synoptical history of medicine from the days of Hippocrates to the time when it attained rank as a science.

The Faculty address was delivered by Prof. A. M. Carpenter. It was a lengthy tribute to medicine, and replete with suggestions to those who were about to enter upon its practice. He urged the graduates to be careful of their professional deportment, and to so labor in the interests of the healing art as to cover themselves with renown, and reflect credit upon their Alma Mater.

The Hutton prize of \$20 in gold for the best examination upon

mental and nervous diseases was awarded to Theodore Henry Spencer, of Belmont, Ont.

A banquet was given by the college in the evening at the Sherman House. Some two hundred were present, composed of the members of the Faculty, graduates, and friends of the college. A band of music was stationed in the corridor at the entrance to the dining-room, and while the feast was enjoyed some very pleasant music was listened to. The tables were decked with flowers in great profusion, and three hours or more were spent in listening to addresses, recitations, and after-dinner speeches appropriate to the occasion. It was near midnight when the festivities were over.

AN ACCOUNT OF TWO HUNDRED AND EIGHT CONSECUTIVE
CASES OF ABDOMINAL SECTION PERFORMED BETWEEN
MARCH 1ST, AND DECEMBER 31st, 1881.

Mr. Lawson Tait, F. R. S. C., Eng., surgeon to the Birmingham and Midland Hospital for Women, in a paper bearing this title, gives the following analysis of the series:—Exploratory incisions, 13 cases, with no deaths; Incomplete operations, 8 cases, with four deaths. Operations for Cystoma: One Ovary, 36 cases; Both Ovaries, 28; Parovarian Cysts, 12; Hydrosalpinx, 16; Pysalpinx, 20; or 112 cases, 3 deaths. Removal of Uterine Appendages: for Myoma, 26 cases; for chronic Ovaritis, 12; for Menstrual Epilepsy, 1; or 39 cases, 5 deaths. Hepatotomy for Hydatids, 2 cases; Hydatids of Peritoneum, 2; Cholecystotomy for Gallstone, 2; Radical of Hernia, 1; Nephrotomy for Hydatids, 1; Nephrectomy, 1; Intestinal Obstruction, 1; Solid Tumors of Ovary, 3; Hysterectomy for Myoma, 10; Cysts of unknown origin, 1; Tumors of Omentum, 1; Pelvic Abscess opened and drained, 7; Chronic Peritonitis, 4; or 35 cases, 4 deaths. Total, 208 cases, with 16 deaths. These operations were not performed under carbolic spray.—*British Medical Journal*.

Domestic Correspondence.

ARTICLE XII.

EDITOR OF CHICAGO MEDICAL JOURNAL AND EXAMINER:

I have no doubt that the medical profession is somewhat tired of the subject of medical ethics. But the discussion continues, and recently the *N. Y. Medical Journal* has opened its columns to a series of articles pro and con. Perhaps I may be excused, therefore, for saying something of the matter now. The disinterested observer, who visits New York, would have to question many physicians before he found one who felt any particular interest in the present ethical fight. At the best attended meeting, called to vote upon the subject, only about one-fourth of the members of the County Society and perhaps one-tenth of the regular profession of the city was present. The general feeling is, that the real importance of the question has been exaggerated by outside agencies for an advertising purpose; and that medical practice here, as everywhere, goes on with very little reference to disciplinary codes. This view is strengthened by the fact that no case of discipline for consulting with irregulars has occurred in fifteen years in this city, or, I believe, in the State. It is somewhat curious that before the new code instances of sinful consultation by certain eminent physicians were well known to occur, and that some, to whom the practice was most ascribed, are now vigorously championing the old code.

It is a mistake to think that there is any especial antagonism among the physicians of the city. I do not think that many favor the present code as a whole, but only the now restrictive clause in it. The majority prefer, I should say, the declaratory resolutions or Genterman's code. Many others would like the

old code minus the restriction clause, and a little refurbished in other respects.

It is idle to expect that New York will ever return to the old code in its entirety, however. It would require a two-thirds vote to do it, and at the last meeting of the State Society, despite most laborious canvassing, there was not even a majority. The meeting was a full one, and each side did its best to bring out all its friends. The battle was fairly fought with no parliamentary tricks or political manipulation. The vote represented the general feeling in the State. This is shown by the canvas made by Dr. Smith, the secretary of the society. Among nearly 700 answers to his query as to which side the individuals took upon the matter of the code, there were about 340 in favor and not quite 300 against the present code. About one-third of the profession of the State live in New York, and less than one-third of the answers came from this city, the "ayes" and "noes" being about 80 to 120, as I remember the figures. So that the returns represent the feeling in the country, as well as city.

The statement is made that of the 59 county societies, only 6 have taken action in favor of the present code, while 36 have taken action against it. It should be borne in mind, however, that the six include New York county, Albany county and King's county, and that their representation is 47 out of the total of 123 county delegates. Assuming that the 17 counties which took no action had but one delegate, there would still be considerably over one-half of the county representation which took no action against the code. I have assumed that King's county is favorable to non-restriction, because I understand and believe that the vote rescinding instructions to delegates really represented the feeling of the majority of Brooklyn practitioners.

Perhaps one reason why the State of New York sustained its last year's action, is to be found in the character of the criticisms made upon it. Here are some examples :

"It disturbed 'a custom approved and sanctified by wisdom and experience of ages.'"

"A disgraceful act."

"In the interest of specialists."

"It (the Code) does not exclude the licensed cancer quack, midwife or chiroprapist."

"Fifty doctors, reckless of honor, and greedy for gold, undertook to sell out the profession."

"A complete surrender to homœopathy."

"It (the code) asserts the propriety of consulting with homœopaths."

"Most unwise, ill-timed and injurious * * * untenable in every respect and not sustained by the action of any other respectable body in Europe or America."

"An unwise and useless code—a code which sacrifices the self-respect and honor of the members of a once honorable profession in order to pander to the interests of a few specialists."

"Hurried through by a small majority."

"A significant fact that the new code agitation was entirely inaugurated by specialists, and that every man who has taken at all an active part in securing its adoption and preventing its repeal is a specialist."

It has been keenly felt that these charges are, every one of them, untrue and unjust. Their constant iteration has, no doubt, made converts to the other side. For this reason, also, many in the city who did not entirely approve of the new code, felt gratified after all that it was sustained.

The charge against the specialists is made each time with as much triumph as if the authors had achieved an intellectual victory and satisfactorily solved the whole problem of ethics. But I think all candid men will agree that this is a side issue; that the question is really as to the right and advisability of allowing individual freedom in professional conduct, just as is allowed to members of all other professions and pursuits.

At any rate, in the State Society, it was not a question between specialists and general practitioners, for among the 105 votes for the new code, I can count only 16 specialists. In this city the proportion of specialists among the anti-code men is relatively considerable. The Southern and Western gentlemen who say such severe things against the honesty of New York physicians, are probably ignorant of the methods in which specialists here do their work. This is chiefly done in the office, and the general

practitioner does not bring his patients, but sends them. The patient is examined and prescribed for independently of his own physician.

I do not write to defend our specialists, however, who can, no doubt, take care of themselves; but only for fair treatment towards them and towards the profession of New York. It seems to me that there is no call for so much violent feeling and vituperative language. The profession is not going to be destroyed or disintegrated, as has been intimated. I do not think that we are victims of moral decay. I find it perfectly safe to mingle freely with my neighbors. The view in this city, I think, is, that by removing a restriction that had been a dead letter, we have placed ourselves in a better light before the world; have removed an affront and a stimulus to homœopathic progress, and have only set aside a technical morality which infringed on the individual's rights without elevating him in return. We believe that the true work for professional elevation lies in securing a higher educational standard, better trained minds, a more scientific spirit, and a greater technical skill in our midst. We believe that this work can be better done without the embarrassment and reproach caused by the restrictive code. We believe that skilled and learned physicians, obedient to the laws of God and the dictates of common morality are what the profession needs.

Why cannot the profession at large admit that we too in New York may, perhaps, be honest and earnest in our views. And is it not barely possible that the American Medical Association has been a little hasty in cutting off from its membership a State like New York, because of an honest disagreement in by-laws?

The Cartwright lectures, recently delivered by your townsman, Dr. W. T. Belfield, have excited much interest, and have been very well received. Dr. Belfield has done good service in showing that there is a genuine basis to the new bacterial pathology, and that micro-organisms cannot be dismissed, as is so often done, with a contemptuous reference to German theories.

The Post-Graduate School and the New York Polielinic have both done very well during the past season, and both have secured unquestioned success. With the benefits of a year's experience, no doubt there will be still further improvements in the future.

Our didactic colleges are beginning to be aroused to the fact that these post-graduate institutions mean something.

We are to have a new morgue, at an expense of \$50,000. The present morgue is a mere shed, where bodies are piled away in coffins, awaiting inspection and identification, and mortuary ceremonies. There is a room with marble tables, separated from a passage-way by a glass partition, like that of the Paris morgue. The exposure of bodies here, however, drew so many persons, that it is not now used. There were 6000 corpses received at the morgue yearly, of whom about 160 were unidentified.

The hospital Saturday and Sunday collections fell off somewhat this year. The collection in 1881 was \$42,000. In 1882-3 it was not quite \$40,000. The reason, it is said, is that the churches were not attacked in the right way, that there was too much Episcopalianism in the committee, and too much reliance upon violent advertising in the paper. The plan is a good one, however, and it will doubtless be more successful next year. The Catholics here refuse to join the movement.

The profession has sustained a great loss in the sudden death of Dr. Beard. He was a tireless worker, and one of the most agreeable, witty and original of men. He left two works in manuscript, which will shortly be published. One was entitled "Medical Education," the other "Sexual and Other Varieties of Neurasthenia." The manuscripts were left by him in charge of Dr. Charles L. Dana, who will edit them.

One of the new, but most useful organizations in the city is the Charity Organization Society. One hundred and eight religious and charitable agencies are now making regular exchanges through it. The number of cases reported to the society up to December 1 was 37,937, while 4,557 notices concerning cases of duplicate relief have been sent to parties interested. There has been established a Bureau of Fraudulent Cases, and blanks have been sent to charitable institutions to be filled out with names of begging letter-writers, professional mendicants, hospital-rounders, and other impostors upon the charitable public.

Two of the colleges have just held their commencements. The University graduated a class of 164; Bellevue, a class of 166. It is said that both colleges are somewhat more rigid in examin-

ations than formerly, and both, no doubt, do as much as is possible for a student in two six-month courses. The College of Physicians and Surgeons continues to be successful in sustaining its longer term.

The subject of *convallaria maialis* has been much talked of in medical societies of late. On the whole, the conclusion is being reached that it is less valuable than *digitalis*. It seems to be especially efficacious in relieving dyspnoea, due to emphysema or a weakened heart. In a case of this kind of my own, its effects were good, but very temporary.

Efforts are being made to obtain a law taking the power of licensing away from the colleges and giving it to a State Board of Examiners. The plan was endorsed by the State Society, and it is said to have a good chance of being carried out. The colleges of this city do not oppose it, at least two of them do not. The law, if enacted, will also modify and improve somewhat the registration law. This latter has worked well in New York City, but it has been a dead letter, so far as the prosecution of those fraudulently registering is concerned, in other parts of the State. It is claimed that medical law-making has been a failure, but though there have been mistakes, the charge, as a whole, is hardly true. It is believed that by suitable laws we can secure a system of licensing and registering which will exclude quacks and greatly elevate the general status of the doctors throughout the State.

M. S.

NEW YORK, March 20, 1883.

MORTALITY, CHICAGO, MONTH OF FEBRUARY, 1883. —Dr. DeWolf, Health Commissioner, reports during February a total mortality of 859. This is 119 less than that for February of 1882. Pneumonia is the first disease in number of deaths (87); infantile convulsions (80) is next; phthisis pulmonalis (79) next; diphtheria (34) next; murder, two; manslaughter, two.

Society Reports.

ARTICLE XIII.

THE TRI-STATE MEDICAL SOCIETY.

One of the most important medical events of the year will be the meeting of the Tri-State Medical Society, at Indianapolis, in September. Already the work for this convention is far advanced, owing to the almost perfect organization of the society.

Some years ago the society found that the hospitality of the citizens, in the places of meeting, to some extent interfered with its proper work, and that long papers crowded out shorter and better ones. It was then resolved that the society accept of no banquets, etc., and that all papers be limited to twenty-five minutes.

From that time the increase in interest and attendance was marked, and now, during each of the three days of the meeting, three sessions are held, fully occupied with short, practical papers and discussions, the authors having been previously selected by the committee on programme.

The "Tri-State" is in exact harmony with the different State and other local societies, leaving to them all matters of legislation and ethics, and requiring that its members be also members in good standing of one or more of these.

The territory embraced is Indiana, Kentucky and Illinois, to which Cincinnati and St. Louis have been added. At the last meeting there were many visitors from other States.

The "Tri-State" holds front rank in reputation, in both Europe and America, as a working society, and work has been the secret of its success.

For further information, address any of the officers: Dr. Wm. Porter, St. Louis, president; Dr. G. W. Burton, Mitchell, Ind., secretary; Dr. F. W. Beard, Vincennes, Ind., treasurer; Dr. T. B. Harvey, Indianapolis, chairman of committee of arrangements; Dr. J. L. Thompson, Indianapolis, chairman of committee on programme.

Respectfully,

G. W. BURTON, *Sec'y.*

ARTICLE XIV.

REPORT OF MEETING CHICAGO PATHOLOGICAL SOCIETY.

March 12, 1883. Society called to order by the president, Dr. Lyman.

The minutes of the last meeting were read and approved.

The following named gentlemen were elected to membership: Drs. J. J. M. Angear, C. A. Bucher, A. B. Bausman.

Dr. G. M. Hammond was proposed for membership by Drs. Bennett and Lyman, and Dr. J. M. Patton by Drs. Webster and Tebbetts.

Dr. A. Lagorio read a paper entitled "The Hypodermatic Treatment of Syphilis," which was discussed by the society.

Dr. G. Frank Lydston next read a paper entitled "The Treatment of Bubo," which was also discussed by the society.

The essaysists were requested, by the president, to offer their papers for publication in some journal.

Present, Drs. Newton, Taggart, Lyons, Hanson, Angear, Haight, Bennett, Lagorio, Lyman, Hammond, Lydston, Camp, Dobbin, Campbell, Tebbetts, and three visitors.

The society, on motion, adjourned.

I. H. TEBBETTS, *Secretary.*

PROF. DANFORTH'S clinic at St. Luke's Hospital, Thursdays, is at 1.30 P. M.

Reviews and Book Notices.

ARTICLE XV.—PHYSICAL EXPLORATION OF THE LUNGS BY MEANS OF AUSCULTATION AND PERCUSSION. Three Lectures by AUSTIN FLINT, M.D., Delivered before the Philadelphia County Medical Society.

This is a reprint in book form of these lectures, which were delivered by the well-known teacher and author at the invitation of the Philadelphia County Medical Society. The lectures have recently appeared in one of the Eastern journals. Although to many the subject is old, there is still a large portion of the medical profession who are not entirely conversant with the subject of physical diagnosis, and to them these lectures cannot fail to be of much interest. Compliments are unnecessary when this author's name is found.

E. F. I.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.

Quain's Anatomy. Ninth Edition, 2 Vols. N. Y., Wm. Wood & Co. Chicago, W. T. Keener.

Manual of Histology. Satterthwaite. Second Edition. N. Y., Wm. Wood & Co. Chicago, W. T. Keener.

Diseases of the Prostate. Thompson. Phila., P. Blakiston, Son & Co. Chicago, W. T. Keener.

Vision, its Optical Defects. Fenner. Second Edition. Phila., P. Blakiston, Son & Co. Chicago, W. T. Keener.

Manual of Gynecology. Hart and Barbour. N. Y., Wm. Wood & Co., Med. Lib. Chicago, W. T. Keener.

- The Untoward Effects of Drugs. Lewin. Detroit, G. S. Davis.
- Experimental Pharmacology. L. Hermann Zurich. Lea's Son & Co. Chicago, Jansen, McClurg & Co.
- Nerve Prostration and Hysteria. W. S. Playfair, London. Phila., Lea's Son & Co. Chicago, Jansen, McClurg & Co.
- Physical Exploration of the Lungs. Flint. Phila., H. C. Lea's Son & Co. Jansen, McClurg & Co.
- Chronic Bronchitis. Bartholow. W. T. Keener.
- The Uterus, Ovaries and Fallopian Tubes. Courty. N. Y., Blakiston, Son & Co. W. T. Keener.

PAMPHLETS.

- Modified Listerism in Ovariectomy. Edw. W. Jenks.
- A Large Fibro-Cyst of the Uterus and Ovarian Cystoma, with Pregnancy. Operation. Recovery. Walter Coles.
- Remarks on 177 Operations for Entropium and Trichiasis. F. C. Hotz.
- Transactions State Medical Society of Arkansas. 1882.
- Contributions from the Chemical Laboratory of the University of Michigan. Prescott & Vaughan.
- The Treatment of Acute Eczema. Geo. H. Rohe.
- Bacteria and their Presence in Syphilitic Secretions. R. H. Morrison.
- Percentage of College-bred Men in the Medical Profession. Chas. McIntire.
- The Clinical Diagnosis of Bright's Disease. C. W. Purdy.
- Annual Report Marine Hospital Service. 1882.
- Traumatic Tetanus. Recovery under Quinine and Alcohol. Sphæro-Bacteria Present in the Blood. D. R. Brower.
- Micro-Organisms in the Blood of Tetanus. Lester Curtis.
- Preliminary Report on the Yellow Fever Epidemic of 1882 in the State of Texas. Treasury Department.
- On the Question of Hypertrophy of the Osseous Structure of the Turbinate Bones. D. Bryson Delavan.
- Bromide of Ethyl. Julian J. Chisolm.
- Announcement Toledo Medical College. 1883.
- What Shall We Do for the Drunkard? Orpheus Everts.
- Annual Address before the American Academy of Medicine, Philadelphia. Triall Green.
- Uterine Massage. A. Reeves Jackson.
- Tacheotomy in Illinois. H. Z. Gill.

- Treatment of Puerperal Septicæmia by Intra-Uterine Injections. Edw. Jenks. 1880.
- Best Methods of Treating Operative Wounds. Henry O. Marcy.
- Deflection of the Septum Narium. E. Fletcher Ingals.
- Obstructions in the Larynx and Trachea. E. Fletcher Ingals.
- Announcement Cooper Medical College, San Francisco. Session 1883.
- Announcement of Spring Course, College of Physicians and Surgeons. 1883.
- Management of Chronic Inebriates. Albert N. Blodgett.
- Transactions of the American Dermatological Association. 1882. Arthur Van Harlingen, Secretary.
- A Simple Suction Drainage Tube for Suppurating Pleural Cavities. Edmund Andrews.
- On Prehistoric Trephining and Historic Amulets. Robert Fletcher.
- Contribution to Surgical Gynæcology. Edw. W. Jenks.
- Present Status of Antiseptic Surgery. R. Park.
- Stricture of the Rectum Treated by Electrolysis. R. Newman.
- Medical Communications of the Massachusetts Medical Society. Vol. XIII, No. 1. 1882.
- Analysis of Eight Thousand Cases of Skin Disease. L. D. Bulkley.
- Naso-Antral Catarrh and Its Treatment. W. N. Daly.
- Transactions Medical Society of West Virginia. Fourteenth and Fifteenth Annual Sessions. 1881 and 1882.
- Address in Surgery, Excisions of Portions of the Alimentary Canal Covered by Peritoneum. W. A. Byrd.
- Life of John M. Briggs. W. K. Bowling.
- Early Diagnosis of Chronic Bright's Disease. T. A. McBride.
- Placental Delivery in Mammals. Henry O. Marcy.
- Addresses on the Dedication of Cooper Medical College Building. By Levi C. Lane and Edw. R. Taylor.
- Fifty-seventh Annual Report of the Massachusetts Charitable Eye and Ear Infirmary. 1882.
- Investigation into the Parasites in the Pork Supply of Montreal. Osler and Clement.
- Value of Graduated Pressure in Diseases of the Vagina, Uterus, Ovaries and Other Appendages. Nathau Bozeman.
- Laryngeal Hæmorrhage. J. Bettman.

- Amnesic Aphasia. E. Wyllys Andrews.
Second Annual Report of the Astronomer of Yale College Observatory.
1892.
The Yellow Oxide of Mercury. W. W. Seeley.
Summary of Monthly Medical Reports Southern Illinois Penitentiary. H.
Z. Gill.
The Differential Diagnosis of the Cause of Sudden Unconsciousness. R.
O. Beard.
Glycosuria. O. C. DeWolf.
Some Points on the Administration of Anæsthetics. Geo. H. Rohe.
First Biennial Report of the Michigan Free Eye and Ear Infirmary. 1892.
The Growth of Children. Geo. W. Peckham.
Transactions of the Michigan State Medical Society. 1892.
The City of Mobile as a Winter Resort. W. H. Anderson.
The Antiseptic Treatment of Wounds. W. T. Briggs.
Restraint and Seclusion in American Institutions for the Insane. H. M.
Bannister and H. N. Moyer.
Elephantiasis Arabum in the Samoan Islands. A. C. Hefflinger.
Meteorology and Rainfall. J. F. Bateman.
Remarks on Climate in Relation to Organic Nature. Surgeon-General C.
A. Gordon, M.D., C.B.
The Malignity of Syphilis. L. D. Bulkley.
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THE TREATMENT OF HYDROPS WITH *BLATTA ORIENTALIS*.

In the Medical Society of St. Petersburg, Dr. Bogomslow reported his experience with this drug in cases of hydrops. The latter was produced by disease of the heart in fifteen cases; by diseases of the kidney fifty-two times, and in three persons by degeneration of the liver. In twenty-nine cases the remedy was given as a powder, and as a tincture in the others. Profuse sweating was produced in nineteen cases, while in sixty-one there was increased urination, and in thirteen diarrhœa was provoked. —*St. Petersburg Med. Wochenschrift*.

Translations from Foreign Exchanges.

BY O. STROINSKI, M.D., CHICAGO.

OSSIFICATION OF THE CHOROID.

The changes of tissue in the middle eye have been well studied but the changes in the choroid have not been fully described. Ossification of the choroid has been thought to be a result of changes in the vitreous lamella or in the capillaries of the former. Dr. Hoene of Warsaw, has examined two eyes enucleated by Dr. Galezowski, at Paris. One eye was affected with irido-choroiditis from traumatic influence. The middle of the eye-globe showed an osseous zone adherent to the sclerotic at the point of entrance of the optic nerve. In the anterior parts the sclera as well as the choroid could be easily detached from the osseous zone. The choroid which has a light appearance was more adherent to the sclera than to the osseous zone by the ciliary nerves which were well preserved. It was but at the divergence of the optic nerve that the two members were united so intimately to the osseous tissue that it was difficult to separate them. The ciliary body was absolutely free, and had no connection with the osseous tissue. The iris was free on its anterior aspect, but on its posterior surface was attached to the capsule of the lens. The lens was attached to the choroid by connective tissue which was easily detached with scissors. The same tissue was found in the middle of the choroid. The latter had a rough surface and showed on its aspect an osseous tissue. It could be divided into two layers, the posterior of which was hard and showed under the microscope the appearance of osseous tissue, the anterior part of the chorodea having a tissue of blackish color which could be easily removed

with scissors. The different parts of the sclera and choroidea were examined under the microscope, the decalcification of the osseous tissue having been effected by a saturated solution of picric acid. Dissection of the sclera proved the fibrous tissue to be normal, but on the attachment to the optic nerve the fibrous tissue showed an intra-cellular infiltration and was evidently enlarged as it approached the choroid.

The adjacent choroid had not the elements constituting the normal tunica vascularis, but was entirely occupied by the new tissue. The large fibers composing the vitreous lamella were hypertrophied as also those of the amorphous tissue and of the small vessels. This tissue was colored by picrocarmine. The histological construction of the choroid differed essentially in its different parts. The ciliary body and the next attached parts of the choroid were not much altered here but the posterior parts showed great modifications. The alterations of the anterior parts were an hypertrophy of the walls of the blood-vessels with enlargement of the caliber. The cells contained less pigment but they were of normal size. The posterior parts of the choroid had no pigment and were changed to an amorphous mass with fine fibers containing small cells. Neither the chorio-capillaris nor the vitreous lamella could be distinguished, new tissue having taken its place. The vessels in this part were hypertrophied and showed cellular infiltration of the walls. This infiltration progressed forward, and the whole choroidea formed a fine layer intensely pigmented and surrounded by an embryonal layer which replaced the other layers of the choroid. The dissection in the osseous ring showed this to be a true-osseous formation in form of osseous blades which united by prolongations and which had a meridional direction. Each blade was composed of osseous lamellæ which formed a circle around a central orifice, the canal of Harvey. The osseous corpuscles were disseminated between the singular lamellæ. Between the osseous blades was a connective tissue which formed by its fibers a small vessel. In the anterior parts the lamellous structure was less distinct. Between the small osseous blades there was a fibrous tissue with curved fibers which contained the same connective tissue interspersed with

amorphous and fatty masses. The choroid was but slightly attached to the osseous tissue. In the posterior parts, the osseous blades were deposited in embryonal tissue and connected with it by fibrillar prolongations. The nervous elements of the retina were lost and instead was found connective tissue with very fine fibers and globules. The corpus vitreum was changed to a layer of fine fibrillæ connected with the remnant of the retina. The osseous tissue was also dispersed to the inner side and the osseous blades transgressed freely the connective tissue.

The second eye-ball had been subjected to Critchett's operation, but, while the symptoms of sympathetic ophthalmia had attacked the other eye it had been enucleated. The ball had been preserved for ten months in alcohol and presented the form of a nut with flattening on the anterior surface traversed horizontally in the middle of the ball by a cicatrix which was the result of the operation. The margins of the cicatrix adhered to the contents of the globe. Beneath these adhesions, the sclera was easily detached on one side of the entrance of the optic nerve, on the other, on the macula. On the sclera was seen a very fine internal membrane containing pigment easily detached. This membrane was apparently the atrophied choroid and the ciliary body was hardly distinguishable. The iris was very transparent but intact. There were but traces of the lens as a natural cause of the operation. By slight traction the optic nerve was easily detached except on the macula lutea, which was whitish yellow in color and of osseous consistence. As to the formation of osseous tissue there are two different formations, one of connective changing directly into osseous tissue, the other by metamorphosis of cartilage by infiltration of cellular tissue with lime salts (metaplastic) which latter did not show the osseous blades of metaplastic formation. While the osseous tissue in these cases had a perfect lamellar structure it was the fibrillar tissue originating from embryonal tissue which formed the osseous tissue. It is therefore the opinion of the author, that the osseous tissue of the choroidea originates from embryonal tissue reproduced by excessive exudation from the choroid and which produces a new formation of the original tissue.—*Recueil d' Ophthalmologie.*

ON STRICTURES IN THE UPPER AERIAL DUCT CAUSED BY SCARS.

In Volkmann's *Sammlung Klinischer Beiträge*, Dr. Jacobson publishes his experience with these strictures. They are caused mostly by traumatic influence. Syphilis is the source of a good many; and the author gives the autopsy of a woman, where the stricture was found in the fourth tracheal ring. Of infectious diseases causing strictures, typhoid fever, small-pox, diphtheria and glanders are named. There is stenosis of the upper part from its non-use, in persons who have undergone tracheotomy. Congenital stenosis is interesting from an anatomical standpoint. There are stenoses from granulations produced by ulcerative processes in the trachea, on the margin of ulcers. Stenoses may be provoked by defects and loss of substance, with consecutive reparation by scar tissue and shrinking, by thickening of the submucosa and of the perichondrium, caused by long-continued and deeply situated inflammation, in fractures and luxations by dislocations of the cartilages and their segments, by ankylosis of the joints of the ring and ary-cartilage, and by partial or total extirpation of the vocal cords. The cartilages being intact, there is but a slight narrowing, but otherwise these are the most indurated and narrowed strictures. Beneath the stricture the aerial duct is often dilated, with emphysema of the lungs. The strictures are single or multiple. They are membranous, ring-like, cylindrical or funnel-shaped. A slight stricture often gives no symptoms. Troubles in respiration are often more dependent upon such complications as swelling, accumulation of mucus, etc., than upon the degree of constriction. The first symptom of a stricture is very often a sudden attack of severe dyspnœa. In other cases, the trouble in respiration begins slowly, and that especially after traveling or long speeches. Respiration becomes gradually more difficult, and there are heard, even at a long distance, certain laryngo-tracheal noises. Here local pain is frequent, with croup and dysphagia, and the voice is more or less changed, according to the seat of the stricture. The diagnosis has to be made by *palpation of the larynx and trachea*, the laryngoscope being often of no use whatever. The seat of the stricture is of the greatest importance for the treatment of the case. After

infectious diseases, the larynx is especially affected; in syphilis the stricture is mostly above the ring cartilage, and strictures of traumatic origin are found in the upper part of the throat. Strictures of the larynx change the voice considerably, and this is often noticed before the impeded respiration. Dysphagia, cough, and local pain are frequent. The trouble in respiration increases rapidly, and the larynx makes forced motions down to the jugulum and back. If the patient has undergone tracheotomy, the larynx has to be examined by a fenestrated canule, or by bougies or sounds. In strictures of the trachea or of the bronchi, the voice is clear, but weak; trouble in respiration increases gradually; stenosis of a main bronchus causes abolition of the respiratory murmur in the respiratory lung. The deeper the seat of the stricture, the more unfavorable the final result. The caliber and condition of the walls are of the greatest importance in the treatment.—*Correspond. Blatt f. Schweizer Aertze.*

A CASE OF LARGE ABSCESS IN THE BRAIN.

The patient was a girl of seven years, and had suffered for two years from pains in the left temple, with caries of the squamous portion of the left temporal bone, and an aperture as large as a five-cent piece, but she had always been of an amiable character and fair intelligence. The opening was treated with iodoform. Afterward severe headache, with increased pulse, followed, and a high temperature, with vertigo, insomnia, and psychical excitability, with clonic contraction of the muscles. But she retained her consciousness, and even amidst the most severe pains in the head, she welcomed her relatives with joy. The diagnosis was acute meningitis, with diffusion of the inflammatory process. The treatment was without success. Epileptiform attacks, mydriasis, paralysis of the right extremities, and partial paralysis of the left side, with coma, followed. To relieve the pressure on the left cerebral hemisphere, a trepan was applied on the squamous portion of the left temporal bone, and 250 grms. of a dense pus withdrawn. A drainage tube was inserted, and a solution of phenic acid injected. In the afternoon, the girl was found sitting on her bed, without any symptoms of coma or paralysis. But the mydriasis continued, and the pulse became weak. On the

next day an epileptiform attack set in, and vomiting followed. The flow of pus decreasing, a larger drainage tube was inserted, and the sac washed out. After two weeks aphasia followed, with slight paresis on the left side. After another week, hæmorrhage from the temporal aperture appeared, which was followed by general paralysis, coma and death. The autopsy showed, beside the large opening in the squamous portion of the temporal bone, adhesions of the meninges with the cranium, and a large aperture of the brain down to the inferior convolutions, and communicating with the left lateral ventricle. Complete softening of the cerebral cortex extended from the orbital portion to the frontal lobes, and from the superior parietal convolutions and the superior parietal sulcus to the left, and further from the margin of the ascendant parietal convolution to the right side. The brain itself formed a generally disorganized mass. The retained consciousness, and the continued use of language in a lesion of such extent, form a curious part of the case.—*Gazetta medica Italiana*.

THE SUBSEROUS FIBROID OF THE UTERUS.

In performing laparotomy for fibroma of the uterus, there has been made no differentiation as to whether the tumor was subserous, with a pedicle, or if it was intramural. This differentiation is at the present time of more importance than the question as to amputation in the body or cervix uteri. Theoretically, the removal of a subserous pedunculated tumor seems to be easier than the removal of an intramural tumor, but the mortality has been equal but for a short time. At present, the extirpation of pedunculated subserous tumors offers no difficulty, and only the pedicle remaining gives rise to complications. The symptoms of these tumors are very different; subserous tumors causing no hæmorrhages, while in submucous and intramural tumors the hæmorrhages are the main symptom. As mechanical results, there are flexions of the uterus, with pressure on the neighboring parts. They are especially serious in intramural tumors. The special kind of pain characterizes the region of development. In interstitial tumors, there is a pain of pulling down at the time of the menses; in submucous, there are labor-pains; in subserous, peritoneal pains. Ascites is frequent in submucous and interstitial

fibroids as a cause of anæmia, produced by severe hæmorrhages; in subserous, by injury of the peritoneum. Peritonitis is frequent in the latter. A large-sized tumor provokes dyspnœa; of rarer occurrence are eclampsia, hæmato-hydro- and pyo-metra. Sterility is frequent in submucous and interstitial, rare in subserous tumors. The indications for laparotomy are, 1, in interstitial tumors, severe hæmorrhage; severe symptoms of pressure on adjacent parts, and dyspnœa of high degree. 2, in pedunculated subserous fibroids, severe pains; ascites; peritonitis; sterility; labor pains by pressure in dyspnœa. The prognosis in pedunculated subserous fibroids is favorable. The author, Dr. Boener, gives twelve cases, all of which recovered. Operations of a former date were unfavorable. The treatment of the pedicle is of great importance. Sometimes the adhesions connecting the uterus with the abdominal walls rupture suddenly, and these cases are favorable.—*Correspondenz Blatt f. Schweizer Aertze.*

SYPHILIS OF THE SPINAL CORD.

The anatomical changes of syphilis in the spinal cord are similar to those of the brain, but there has never been mentioned an anatomical change in the blood-vessels of the cord. The following case shows some interesting points in this respect. The patient was a woman forty-three years of age, who had always been healthy till her marriage. The husband had at the time of the marriage an ulcer on the genitals, and the woman had suffered from several abortions, with profuse hæmorrhage. During the last two years she became absent-minded, and her spirits were very low. This condition alternated with excessive excitement, which developed to mania errabunda. She died suddenly in collapse. The dura mater of the brain was thickened and turbid on the pons varolii, and this extended to the sulcus longitudinalis. There were adhesions between the dura and the brain substance. The arteries of the base of the brain, and especially the two arteries of the fossa Sylvii and the branches of the circulus arteriosus of Willis showed nodular concretions. The brain substance was generally anæmic, and on the corpus striatum there was a soft black spot. The cervical part of the spinal cord was hard. The inner aspect of the great arteries and veins showed

microscopically a syphilitic degeneration. There were concretions in the walls of the vessels which diminished the caliber of the vessels in their diameter, and which occluded the lumen of the vessel to complete obstruction. The process of inflammation with exudation could be easily traced in every vessel. The obliterating process had been provoked by the pia mater, grossly infected with the syphilitic virus, and propagating itself in the veins and arteries in a special manner. There existed, besides the syphilitic lesion of the brain and the spinal cord, a chronic interstitial nephritis and osteosclerosis of the left caput femoris. —*Gazetta medica Italiana*.

SURGERY À LA WAGNER.

Many musicians cannot comprehend the musical works written by Richard Wagner, and for many surgeons outside the German empire, the tasks undertaken by the surgeons of this enlightened country are difficult to understand. There was a virgin of twenty-seven summers, somewhat retarded in physical development from want of food and other necessities of life. This rather squat-figured lady came under the treatment of a quack, while suffering from irregularities in her monthly periods, who finished his abominable treatment by producing a prolapsus uteri et vaginæ. The lady went here and there to get relief from the swinging burden, but without avail. She then came into the hands of Dr. Kuhne, who found a common prolapsus, even without any dislocation on the part of the rectum or bladder. He tried some pessaries, but not being satisfied with their behavior, he performed episiorraphy. But even through the occluded vulva the vagina and uterus were seen dangling, much to the chagrin of the doctor. What now? he asked, and he extirpated both ovaries, the fallopian tubes, and a part of the fundus uteri, which latter he affixed to the abdominal walls with fine sutures, after having it covered well with the parietal peritoneum. This somewhat dangerous operation had the astonishing result that the prolapsus was seen dangling again in its old place, much to the chagrin of the doctor. He now became very angry, and he performed episiorraphy a second time, with apparently satisfac-

tory results, and we have not heard of further operations on the prolapsus of the short-figured maiden.—*L'Union médicale*.

SYPHILIS AND DEMENTIA PARALYTICA.

Tabes dorsalis and syphilis are in intimate connection; or rather, as recently proved, there are many cases of locomotor ataxy originating from syphilis. The relation between syphilis and dementia paralytica has not been sufficiently demonstrated. Dr. Oberstine has made examinations upon this point, and he found among 1,000 insane persons (660 males and 340 females), 175 affected with dementia paralytica. Syphilis was found among the whole number 73 times. Paralysis and syphilis were observed in the same person 37 times, *i. e.*, 21.6 per cent. of male persons affected with paralysis had been syphilitic, and in 51.4 per cent. of syphilitic persons progressive paralysis ensued. Of all the other 825 patients, but 35 (4.1 per cent.) were affected with syphilis. The number of patients suffering from syphilis and dementia paralytica was, therefore, five times greater than that of other insane persons suffering from syphilis. The time of syphilitic infection and of the developing dementia varied from six to seven years. Dementia paralytica is often regarded as a chronic periencephalitis, followed by sclerosis and atrophy of the dura mater, without its further consequences. The syphilitic appearances of the brain are, 1, a localized; 2, a more diffuse form. The former is characterized by the appearance of tumors; the latter affects those parts supplied abundantly with blood-vessels, as the dura mater and pia mater. The antisymphilitic treatment of these insane patients has always been followed by rapid improvement.—*Monatschrift f. pract. Dermatol.*

TETANUS IN LYING-IN WOMEN.

K. H., twenty-three years of age, entered the lying-in hospital at Vienna, and was there delivered by craniotomy. On the third day the pulse was 86; temp. 88; tongue dry and red, and cheeks feverish. Patient complained of weakness. A short time after, the first attack set in. On the upper extremities the thumbs were in adduction, and grasped in the palm of the hand; the other

fingers only flexed in the metacarpo-phalangeal joints. The fore-arms were semi-flexed, the hands slightly curved at the wrist, the upper arms adducted. Active and passive motion were impeded by contraction of the muscles. The lower extremities were flexed at the hips and knee-joints, the upper limbs adducted, the muscles of the calf contracted. Any attempt to extend the lower extremities was accompanied by severe pains. By compression of the large blood-vessels of the extremities, the phenomena above described could be easily produced, and on irritation of the nervus facialis by palpating the same, the whole group of the facial muscles was contracted. Bromide of potassium and hypodermic injections of morphine easily relieved the patient. This disease, which is called tetania by Trousseau, has been lately observed quite often. Contractions of the muscles of the trunk have also been seen in these cases. The attacks are repeated in different intervals, and it seems that after a long protracted confinement, the attacks are more severe, and they last longer. The disease is not followed by death or severe consequences.—*Wiener Med. Wochenschrift*.

CANCER OF THE UMBILICUS.

N. W., fifty years of age, entered the hospital October 15, 1880. He complained of excruciating pains in the region of the umbilicus. In the month of November, of the same year, he had zoster in the course of the nervus obturatorius. The patient became emaciated. In the region of the umbilicus there was a tumor of the diameter of two cm. It was of a bluish color, and a little ulcer there separated a serous fluid. The tumor was hard, and the induration around the tumor extended to two cm. in the circumference of the umbilical cicatrix. The diagnosis was cancer of the umbilicus, and the tumor was extirpated antiseptically, the abdominal wall healing per primam. The patient died from cancer of the rectum one year afterward. Under the microscope, the tumor had all the characteristic forms of a cancer. It was covered by a cutis which showed certain tuberos elevations, similar to those of papilloma. The superficial layer was formed by a stroma of connective tissue, with numerous spaces of different form. The connective tissue was of the alveolar structure, and

among the alveoli were interspersed epithelial cells. In the middle part of the tumor, the epithelial cells were more frequent and larger (giant-cells). In the inferior part there were numerous vessels with transverse nuclei. There were also numerous cylindrical epithelial cells.—*Giornale internazionale delle scienze mediche*.

A CASE OF POISONING BY STRYCHNINE TREATED WITH CHLORAL HYDRATE. RECOVERY.

The patient, a girl twenty-three years of age, had taken forty centigram. of strychnine with suicidal intent. An emetic had been given an hour and a half after taking the strychnine, and tannic acid in large doses had also been employed, without relieving the convulsions. The girl had first clonic convulsions, which were followed by tetanus. Forty convulsions had been counted in three hours. Five hours afterward there was complete opisthotonos, with pleurosthotonos, followed by tetanic spasm. An hypodermic injection of .001 pilocarpine was made, and was followed by profuse salivation and perspiration. Chloral hydrate, 12 grms., was administered by the mouth, and as the convulsions did not cease, .030 chloral hydrate was injected hypodermically every half hour. Three hours afterward, another injection of .001 pilocarpine was applied. The body was sometimes in a state of complete rigidity, and the pulse changed from 90 to 120. The lower limbs were in perfect extension, and flexion was impossible. The convulsions stopped twenty-four hours after taking the strychnine, but they reappeared at intervals. Chloral hydrate was applied for the next twenty-four hours, and the doses given amounted to over 100 grm., mostly injected subcutaneously.—*Archives générales de médecine*.

SYPHILIS OF THE PHARYNX.

The patient, a woman thirty-two years of age, lost her appetite and became emaciated after the birth of her first child. She went to Esplugo de Francoli to use the iron baths, and afterward was treated by hydrotherapeutics, but without result. The mucous membrane of the gums and of the conjunctiva became pale, and

there was general atrophy of the muscular system. A slight fever, with night sweats and a high pulse, followed, and difficulty in swallowing was noticed. The symptoms indicated general progressive anæmia. The gums and the tonsils were free from any affection, and only on the posterior part of the pharynx a circular spot was visible, of the size of a dime. It looked like the product of a chronic catarrh. The superficial layer of this spot having been removed by a brush, its true character was easily detected. There was hyperæmia of the mucosa of the larynx, which extended into the Eustachian tube, with diminished hearing and pains. There was profound perturbation of nutrition, but no visible symptoms of general syphilis. Mercury and iodide of potassium effected a speedy cure. The case is remarkable, in that a single spot on the pharynx, without other symptoms of syphilis, reduced the patient to a mere skeleton.—*La Independencia medica Barcelona.*

ANATOMICAL CHANGES IN THE BRAIN IN INFECTIOUS DISEASES.

The tunica interna of the cortical layer shows here a granular fatty deposit, and tumefaction of the endothelial cells. In some cases of typhoid fever and septicæmia, there are colloid spots in the adjacent parts of the vessels. The gangliar cells are entirely changed in the layer of the large cells. In examining the dissections from the periphery to the inner parts, there is found tumefaction of the protoplasm. The pyramidal cells become round or irregular. The fatty granular degeneration is differently developed. In the most advanced stage of degeneration, there are found large nuclei in the intercellular spaces, surrounded by granular protoplasm. In minute examination, some nervous elements are to be found degenerated, and it is probable that gangliar elements have been multiplied by direct division of the nuclei. The anatomical changes in the medulla oblongata are constant. From all the nuclei of nervous origin, and especially those of the pneumogastric nerve, originate normal multipolar cells, round, oval and irregular, also with turbid protoplasm, and there is sometimes a distinct nucleus with a short prolongation. Most cells are smaller than usual. Parenchymatous alterations are also found in the brain.—*Gazetta medica Italiana.*

A CASE OF NON-TUBERCULAR BASILAR MENINGITIS.

A girl, seven years of age, complained of headache and general tremor of the body. Temp. 39.8 R.; pulse 100. Sensorium free; headache most intense on motion of the body. Pupils dilated, reacting well; spleen enlarged; constipation; respiratory organs normal. On the 11th of April, strabismus convergens, with small pupils; facial paresis of the left side; pulse regular; sensorium free. Four days afterward, pupils dilated; abdomen retracted; pulse irregular, with repeated vomiting, and strabismus. At four o'clock in the afternoon, very restless; unconscious; frequent vomiting. On the 26th, complete abolition of consciousness; very much emaciated; splenic tremor persistent. On the 30th, difficulty in swallowing, and death. The course of the disease was fifty-four days, with irregular fever. The autopsy showed basilar meningitis, with internal hydrocephalus and softening of the ventricle. The pia mater was intact; no tubercles found. The diagnosis first indicated tubercular meningitis, but soon the course of the disease proved the case to be of non-tuberculous character.—*Gazetta medica Italiana*.

PARALYSIS FROM HYPODERMIC INJECTIONS OF ETHER.

A. B., twenty-one years of age, had varioloid, and two injections of ether were made on the posterior region of the left forearm (what for?) The next day she complained of severe pains at the point of injection, and three fingers of the left hand lost the power of motion. The pain continued for a week, and also the paralysis of the fingers. The left hand lay in semipronation, the index finger but slightly flexed, while the thumb and middle finger were thrown entirely into the palm of the hand, the other fingers being normal. The flexion of the forearm was perfect, and in this movement there could be felt a contraction of the supinator longus muscle. The electrical exploration showed not the slightest contraction of the extensor communis and abductor of the thumb. Sensibility was intact. The left forearm measured one cm. less than the right arm. Continued applications of the galvanic current relieved the suffering girl — *Archives générales de médecine*.

AN ADENOID TUMOR OF THE HARD PALATE EXTIRPATED WITH
LOWERING OF THE HEAD.

The patient, twenty-four years of age, was the wife of a teacher, who noticed four years ago a small growth on the right side of the palate. At present there was seen a round tumor, of the size of a walnut, reaching forward to the first grinder. There was a transverse scar, resulting from a former incision. At this part the tumor was soft, but at the base of the tumor there was a hard shell, which terminated on both sides with a sharp point. The patient was operated upon with downward hanging head, and the bleeding was so profuse as to protract the otherwise easily performed operation. The hard palate was scraped out with a sharp spoon. Dr. Weinlechner, who performed the operation, has seen *profuse hæmorrhage in all operations with lowered head*. The tumor was an adenoma, with elements of carcinoma. —*Med. Chirurg. Centralblatt*.

RETENTION OF THE PLACENTA FOR TWO YEARS.

Dr. Raugé reported this case in the Société Médicale de l'Aix. The woman was thirty years of age; primipara, and had an abortion in the second or third month of pregnancy, but no physician attended. Severe hæmorrhage persisted for months. For the period of one year afterward the woman suffered from intense pains in the abdomen, and this was accompanied by profuse leucorrhœa. She then suffered from diarrhœa and dysentery. Nineteen months after the first symptoms, the doctor was called, and found the woman in labor-pains. Two hours later, an entirely putrefied placenta was expelled, and a part of the umbilical cord was yet attached to it. Metritis followed, with hæmorrhages which continued for a year. The woman asserts that she never had any connection with her husband from the first attack, and the doctor believes the placenta to be nearly two years old. (What a placenta and what a cord!—Tr.)—*Lyon Médicale*.

OBITUARY.—Dr. D. O. Farrand, an eminent surgeon of Detroit, Michigan, died of congestive apoplexy March 18, 1883, aged forty-five.

Selections.

MODIFIED LISTERISM IN OVARIOTOMY, WITH A REPORT OF FIVE RECENT OPERATIONS. By EDWARD W. JENKS, M.D., Chicago, Illinois.

At the meeting of the Illinois State Medical Society, held in May last, I read a paper in which were embodied my own views regarding Listerism in ovariectomy.

Since the above mentioned paper was written, I have had opportunities of carrying out in practice in several cases, the views I expressed, but as the transactions of the society * are seen only by a limited number, I offer no apology for repeating in substance some of the expressions there made use of.

The readers of this journal are all, doubtless, familiar with the discussions which have taken place in various parts of the civilized world in regard to Listerism in ovariectomy.

It is well known that Keith has ceased to rely on it as he formerly did—having virtually discarded it. At the Clinical Society of London, Lister said but a few months ago, in commenting on a death from carbolic acid, that it is too powerful to safely apply in delicate subjects. This topic was discussed at the last International Medical Congress held in London, where it was expected that Lister would speak in its defense, but he remained silent. Keith there stated that he had discontinued Listerism in his ovariectomy operations. The subject was also discussed by many distinguished operators, including some of our own countrymen. In this country there is an unsettled belief regarding its utility,

* The transactions for 1882 are about ready for distribution. I have this week (Nov. 25, 1882), in reading the proof of my paper, added a foot-note referring to these five cases of ovariectomy.

and while there are some gynecologists who still adhere to pure Listerism in their ovariectomies, there can be no question that the number is less than it was two years ago.

I am convinced, as stated in the paper first referred to, that I have seen two fatal cases of ovariectomy in consequence of the use of carbolic acid spray, and hence am led to believe that a carbolic solution or spray of sufficient strength to destroy bacteria, is an unsafe agent to come in contact with the peritoneum.*

While it is apparent that the adherents of pure Listerism in ovariectomy are gradually diminishing in number, there is no mistaking the fact that since Lister promulgated his theories regarding antiseptics, and carried them into practice, the mortality in ovariectomy has been greatly diminished. While the percentage of recoveries following ovariectomy has been greater since Lister introduced his system, there is one thing pertaining to it that is not so certain, namely: that it has been wholly due to carbolic acid. The profession has been taught by means of Listerism that one of the greatest aids to recovery from surgical operations is perfect cleanliness. All honor, then, I say, to the name of Lister, to whom not the profession only is indebted, but the whole world. Notwithstanding many distinguished surgeons have expressed themselves in strong language against pure Listerism in ovariectomy, all seem to agree that the originator is entitled to our lasting gratitude.

Without quoting from, or even attempting to name the long list of those who have thus expressed themselves, I will merely add for myself that instead of wholly renouncing Listerism in ovariectomy, I am a warm advocate of what may be termed a modified Listerism. The modified form is characterized chiefly by careful attention to perfect cleanliness. The spray can be used in the room prior to the operation, but is not deemed of paramount importance during the exposure of the peritoneum to the atmosphere. Carbolic acid on every instrument, suture, dressing and appliance used, is of less importance than that they should be perfectly clean.

* I am assured by those who have experimented in the matter, that a ten per cent. solution of carbolic acid is the weakest that can be relied on to destroy bacteria, and such a solution will be disastrous in its effect if applied to the peritoneum.

In my own practice, it is possible that I have gone further than many others in regard to carbolic acid, as I consider it such an irritant that I make it a rule to carefully exclude it from contact with the peritoneum. The fluid for the atomizer, if carbolized in the least, I do not have contain over two per cent. of the acid.

The atomizer is, without doubt, of great benefit, if for no other purpose than to render the atmosphere of the operating room in a more favorable condition for exposing the peritoneum, and for this purpose pure water or a two per cent. solution of carbolic acid will suffice.

I can better illustrate the modified Listerism I have used in my ovariectomies, by referring to recent operations—five in number. Of these five, one was unsuccessful. At least three of these may be classed as complicated, and hence, serious cases. For the sake of brevity many matters not pertinent to the subject will be omitted, but there will be given an account in outline of the steps of each operation, and afterwards a summary of the treatment, etc., used in the whole number.

CASE I.—Mrs. M., æt. 36, of N., Mich., when she entered the hospital the last of April, stated that she had been tapped twice, but was unable to say how much fluid had been drawn off at either time. She was then suffering considerable pain through the abdomen, with daily rigors and fever, which I thought might be of malarial character.

I aspirated the tumor for the purpose of examining its contents microscopically. The fluid was found, by my friend Dr. Mercer, to contain fully fifty per cent. of pus.

This being the second suppurating cyst I had ever met with, and having been led by past experience to believe that delay would not lessen the constitutional symptoms, I decided to operate as soon as possible.

Preparatory treatment for a week consisted of daily warm baths followed by inunction and full doses of quinia and iron. The night before I operated, her temperature was 102°.

The morning of the operation ten grains of quinine were administered per rectum. The room was thoroughly filled by the carbolized vapor (two per cent.) by means of an atomizer. Every attention was paid to cleanliness. The ligatures were not carbo-

lized, but clean and well waxed. The spray, during the operation, was not directed toward the patient's abdomen, but, more from oversight than any other reason, was in operation in one corner of the room. The anterior portion of the tumor was so firmly adherent that to detach it was a long and tedious process; there were but few other adhesions and they were easily detached. The pedicle was secured by means of waxed silk, cut short and dropped back. The abdomen was not closed until there was a certainty of the cavity having been thoroughly sponged out and that there were no bleeding points. The tumor was multilocular and was estimated to weigh over thirty pounds. The wound was closed with silver sutures and dressed antiseptically.

This patient made a rapid recovery. Whenever any rise in temperature occurred, from ten to fifteen grains of quinine were administered, either hypodermically or per rectum. At no period of her convalescence did she experience so much discomfort as during the night previous to the operation.

CASE II.—Mrs. O., æt. 50 years, was sent to me by Dr. Muth, of Sheboygan, Wis. This patient was put on the same preparatory treatment as in the preceding case, and on the day of the operation, April 22d, 1882, ten grains of quinine were administered per rectum. The operation was made in the presence of about twenty-five physicians. The room was carbolized by the atomizer, the solution, however, containing only two per cent. of carbolic acid.

There were no particular complications, except adhesions to the omentum, requiring ligation and cutting away of one-fourth of it. No carbolic acid was allowed to enter the peritoneal cavity, nor were the ligatures carbolized, but perfect cleanliness was aimed at. The assistants were each required to wash their hands thoroughly with soap and water by means of a nail brush. The abdomen of the patient was also washed with soap and water, and wiped dry prior to making an incision. The pedicle was ligated with silk, both ends cut short and dropped into the abdomen. Especial pains was taken in sponging out the cavity, that not a drop of blood should be left.

The tumor weighed thirty-nine pounds. Silver wire was used to close the abdominal incision, over which were placed the usual antiseptic dressings, held in place by a flannel bandage.

The after treatment consisted of sufficient morphia to control pain. The temperature was kept down by quinia. During the first week all nourishment was given per rectum.

CASE III. Mrs. B., æt. 29, of H., Mo., was referred to me by Dr. West, now a resident of Monroe, Mich. She had been seen by a number of physicians of repute, and by some of them the case was not considered a favorable one for operation, as the tumor was believed to be extensively adherent.

The usual treatment, as in preceding cases, was prescribed for a week prior to operating. The patient was placed in a private house, temporarily fitted up as a private hospital. I operated May 18th, assisted by Drs. West, Newman, of Chicago, Mitchell, of Iowa, McLean, of Tilsonburg, Ontario, and others. The condition of every instrument and appliance that might possibly be required was made as clean as possible. The spray, with a two per cent. solution of carbolic acid, was used in the room for an hour previous to operation, so that the atmosphere of the room was very humid and of high temperature.

The adhesions were extensive and in every direction, the tumor being adherent to the abdominal walls over nearly its entire anterior surface, to the uterus, bladder, intestines and liver.

The detachment from the liver required the most careful manipulation, but fortunately it was done without injury to that viscus. The pedicle was ligated and other procedures in the operation done as already described. Several bleeding points were secured by silk ligatures and oozing surfaces treated by hot water; but one bleeding locality could not be secured by either of these methods; that was from the abdominal wall near the liver, where the tumor had been firmly adherent. This bleeding surface, of an area as large as the palm of the hand, to which ligatures could not be applied, and hot water would not check, I finally controlled by passing a needle armed with a strong silk ligature from the outside into the abdominal cavity across the oozing surface described, then bringing the needle outside, and by means of a ligature, tying in a fold this portion of the abdominal wall. The bleeding was effectually stopped, and at the end of twelve hours the ligature was removed without doing harm, but good, instead. This patient made a speedy recovery. The

carefully kept record shows that several times when there was a rise in the temperature, quinia in ten-grain doses caused it to descend to the normal point.

CASE IV.—Mrs. S., æt. 38, of G., Ill. This patient was not seen by me until I was called to her residence by telegraph to perform ovariectomy, June 25th. The patient seemed in good condition, and everything looked favorable for her recovery. The usual steps in the operation, as already described, were taken, except that no spray was used. I have never taken more pains to see that everything used about the patient was in a state of perfect cleanliness. The instruments were washed in carbolyzed water, and after the operation, antiseptic dressings were applied. The tumor weighed about fourteen pounds, and had no adhesions except some slight ones in front.

The weather was exceedingly hot, and at the moment when I was about to secure the pedicle there came one of the most terrific thunder storms I have ever witnessed. The room became so dark that lamps were necessary to even see the patient, and in such a dim light as can be better imagined than described, the operation was completed.

She rallied well, and when I left her, eighteen hours after the operation, seemed in a fair way to recover, yet I could but feel apprehensive as to the result, unless there should be a change in the weather.

Unfortunately the change did not come until too late to be of service in this case. The thermometer ranging from 90° to 95° F., with frequent thunder storms continued for several days. This was at the time when all through the west there were cyclones, tornadoes, and thunder storms of daily occurrence. The patient died the third day after the operation, and from all I can learn, I can but believe that the result was attributable to the condition of the atmosphere.

CASE V.—Mrs. H., æt. 52, of Oconto, Wis., first consulted me March 2, 1882, bringing a letter from her physician, Dr. O'Keef, of the same place.

The tumor was then quite small and the patient had such a dread of an operation that I advised her to return home, at the same time saying that in all probability ovariectomy would be

necessary some time. After a time I was telegraphed for, to come to her residence and remove the tumor. On my arrival (May 27th) I found her in a very feeble condition, with the abdomen greatly distended. She was so feeble that an examination caused syncope, and hence the operation of extirpation of the tumor was indefinitely postponed. But there was so much œdema of the lower limbs, and dyspnœa, that it was decided to risk tapping the cyst. I had no aspirator, nor could one be obtained before my return home. I accordingly tapped with a small trocar and drew off twenty-six pounds of fluid. This was much better borne than we expected. She began at once to improve in strength, and in a few days was about the house.

Six weeks later, Dr. O'K. again tapped the tumor, and drew off nearly as much fluid as in the first instance. It was not believed by either Dr. O'K. or myself that the operation of extirpation would ever be performed, and so what was done was considered as merely palliative. I was accordingly greatly surprised to receive a message to come to Oconto and remove the tumor, which was accomplished August 16th. The weather being cool, the room was heated with a stove and then filled with warm vapor by means of the atomizer and so kept during the operation; this I consider fortunate in view of the fact that the peritoneum was exposed to the air an unusually long time.

Believing the bladder to be adherent, I made the exploratory incision a little below the umbilicus, and even then barely escaped wounding the bladder, as its adhesion to the tumor had caused it to be thus elevated.

The adhesions in this case surpassed any I ever encountered before in number and extent. The tumor was adherent to the abdominal wall, the bladder, uterus, mesentery, intestines* and omentum.

The detachment of adhesions required a long time, the most difficult ones being the intestinal and mesenteric. Owing to so many adhesions there was persistent bleeding from many points. To these, ligatures were applied in greater number than I ever used or witnessed before.

*The adhesions to the intestines were quite similar to a case described in the *British Medical Journal*, Oct. 28, 1882.

There were upwards of thirty, including those used on the pedicle, of which none were carbolized, but all had been in boiling water, speedily dried and then waxed. We ceased counting the ligatures after thirty had been used.

The tumor weight thirty-five pounds. After closure of the abdominal incisions the usual antiseptic dressings were applied. I remained with the patient the day following the operation, after which she was left in charge of Dr. O'Keef, of whom I cannot speak in excessive praise.*

This seemed to be one of those cases where a drainage tube was demanded owing to the great number of adhesions, yet as every point seemed to be secure, and the cavity so thoroughly wiped out, it was thought best not to insert one.

The patient was fed and stimulated almost wholly by rectum for fourteen days. I felt greatly encouraged about her recovery, owing to the fact that twelve hours after the operation there was a passage of intestinal flatus. This is an invaluable prognostic sign following the operation.

August 28, I received a telegram from Dr. O'K. stating that the patient showed signs of septicæmia. I replied that if the symptoms did not very soon yield to quinine and stimulants, he had better open the wound and wash out the abdominal cavity. He prepared to do so, but soon after the treatment was instituted she began to improve and without further drawback gradually recovered.

Successful ovariectomies are now so common that the reports of ordinary cases possess no particular interest for the profession, hence I have aimed in the foregoing brief record to mention only what may be termed the most important points. I have stated that I avoided the admission of carbolic acid to the peritoneal cavity, and yet had a carbolized spray in the room. It is true that in this way some of the carbolic acid may enter the peritoneal cavity, but it is in so small an amount as to differ altogether from the playing of a spray directly towards the abdomen of the patient.

* It is quite important that I should also refer to the preparatory treatment in this case. This had been carried out by Dr. O'Keef in accordance with the plan recommended in this paper for several weeks preceding the operation; consequently she was in much better condition than at my previous visit.

Of the foregoing cases all were treated antiseptically, yet not after the method of Lister. Although the spray was used its chief advantage was in rendering the atmosphere humid, as, being only a two per cent. solution, it could not destroy bacteria.

When I have used the ordinary solution by the atomizer, my own hands have been rendered almost useless by the continuous action on them of the carbolic acid, and the peritoneum of the patient whitened by it. It looks reasonable, then, that so delicate a membrane as the peritoneum must be seriously damaged by carbolic acid when a five per cent. solution produces such effects. There may be advantages, even in a weak solution, of which we have no knowledge, and therefore regret that I did not use it in the fatal case, yet do not believe in this instance it would have caused any other result.

I can see no objection in using a five per cent. solution in the room prior to an operation. It may even be well to have a stronger solution atomized on the persons of the assistants and spectators, or even the surgeon himself if there is reason for thinking they may be media for conveying infection; but I must continue to enter my protest against full Listerism on account of the poisonous effects of a strong solution of carbolic acid on peritoneum, and I believe that while we may carbolize the room and spectators prior to operating, we should carefully exclude carbolic acid from the peritoneum, whether by spray, instrument, sutures, sponges, or the hands. Cleanliness is of greater importance than carbolic acid.

I had written the foregoing, when it occurred to my mind to refer to the paper written by my friend, Dr. Englemann, of St. Louis, entitled "Difficulties of Ovariectomy," and published in the *American Journal of Medical Science*, for April, 1882, which I read at the time of its appearance, but had not since seen. The paper is an admirable and instructive one, and I heartily endorse its teachings. It concludes with some "points" which he urges on his readers, from which I select the following as pertinent to my subject: "Avoid routine Listerism, and especially the carbolic acid spray over the hands of the operator and into the abdominal cavity." "Cleanliness, not carbolic acid, is necessary." "Keep sponges clean and warm, but not carbolized." "Ligatures,

sutures and instruments should be clean but not carbolized."

In connection with the subject of Listerism, there is another material besides carbolic acid for which in the outset great things were claimed, viz.: catgut, as a material for ligatures and sutures. My own views regarding this material in obstetrical and gynecological surgery have been heretofore expressed in several papers. A translation of one which was written for a foreign journal* was published in the *News* in 1878. In that paper I gave reasons sustained by facts showing that catgut possessed no advantages in the peritoneal cavity over silk, but on the contrary had been in many instances a positive damage. While catgut may be serviceable in general surgery as in stumps after amputation, and in other parts of the body, it should not be used in ovariectomy, as the tying of a knot securely is not only difficult but the material, being apt to stretch on account of the moisture of the peritoneal cavity, is rendered worthless. Further I have observed in post mortem examinations, where catgut had been previously used in the peritoneal cavity, that it is not less innocuous than silk. I am therefore led to the firm belief that there is no better material for ligatures or sutures than clean non-carbolized silk.

There are many other matters of interest relating to the preparatory and after-treatment of ovariectomy patients, the consideration of which must be omitted from this paper as they do not strictly come within its scope. There are some points, however, bearing upon the prophylaxis of septicæmia (doubtless the most frequent cause of death following the operation) to which brief allusions will be made. I heard not long since a gentleman of repute as a surgeon gynecologist say in quite a boastful manner, "I never give a dose of medicine to my patients until symptoms clearly demand a remedy—nothing to prevent disease—not even a dose of quinine in my ovariectomy cases to prevent septicæmia or for any other reason. When there are symptoms of septicæmia, then I give it." Is there not danger of carrying our contempt for drugs too far in these days when "dosing" is so vigorously assailed? As I consider the prophylaxis of disease one of the most important functions of the medical pro-

* *Archives de Tocologie*, 1878, p. 108 "Sur les sutures de l'utérus dans l'opération Césarienne, par Dr. E. W. Jenks."

fession, I differ most decidedly from my friend just quoted. The majority of ovariologists are aiming to prevent septicaemia when they prescribe baths, inunctions, tonics, and other remedies in preparatory treatment. As quinia is considered the remedy *par excellence* in the treatment of septicaemia, why not administer it as a preventive? In all of my ovariectomies for the past three years, when I have had control of the preparatory treatment, I have given quinia freely for the week preceding the operation, and ten or fifteen grains within an hour of beginning it.

Further, when after the operation there has been a rise of temperature, I have administered quinia either hypodermically or per rectum, with markedly good results, being guided in the amount and frequency by its effect. For hypodermic use, the bisulphate is preferable, on account of its ready solubility in water, and consequently lesser liability of causing abscesses.

To attain success in the greatest number of cases (without taking into consideration the selection of patients), operations should not be made in general hospitals, nor at long distances from the surgeon's residence, as he then is often of necessity obliged to intrust patients to the care of inexperienced and untrained attendants and nurses.

In support of the foregoing: First, sufficient evidence is found in the statement recently published in the medical journals to the effect that the first successful ovariectomy in Bellevue Hospital, New York, is of a very recent date—only since the completion of a new pavillion where it was performed. Second, the reader is referred to statistics and remarks relating to the late Prof. Peaslee's ovariectomies, published in the *American Journal of Obstetrics* for October, 1882, where it is shown that the large percentage of fatal cases were greatly owing to operations made far from his own home and leaving the patient to the care of others thus really having nothing personally to do with either preparatory or after-treatment. The best places for ovariectomies are well-regulated private hospitals, with well-trained nurses and attendants, or private houses for the time being practically converted into private hospitals, with the same kind of nurses and attendants. The advantages of such arrangements cannot but be obvious, and certainly require no lengthy argument in their behalf.

170 State St., Chicago, Ill.

Items.

COOK COUNTY HOSPITAL.

We regret to hear that there is no medical clinic on Tuesday.

The surgical clinic Tuesday is conducted with his usual skill by Dr. Fenger.

On Tuesday the medical and surgical clinic is well conducted by Drs. Henrotin and Hutchinson.

The hospital house staff at present consist of Dr. J. A. Fordyce, Chicago Medical College, house physician. His assistants are:

First assistants—Drs. F. S. Johnson, Chicago Medical College; C. E. Currie, Rush Medical College.

Second assistants—Drs. E. P. Davis, Rush Medical College; Elbert Wing, Chicago.

Dr. G. M. Hammon, Rush Medical College, house surgeon. His assistants are:

First assistants—E. R. Bennett, Rush Medical College; J. E. Marshall, Chicago Medical College.

Second assistants—Dr. M. L. Harris, Rush Medical College; W. G. Clarke, Rush Medical College.

The terms of office of the house physician and house surgeon will expire April 1. There are 440 patients in hospital. A complete set of new medical and surgical instruments has just been purchased.

Upon the 8th and 9th of this month was conducted the annual examination of candidates for the position of internes. Applicants to the number of eighteen presented themselves, and submitted papers in the following branches: Anatomy, physiology, chemistry, surgery, ophthalmology and otology, obstetrics, gynecology, medicine, pathology and materia medica. An hour was

given for answering, in writing, five questions from each examiner. The names are presented, in the order of merit, of those who have gained a position upon the house staff:

G. D. Shaver; Clifford B. Wood; Chas. Davison; Thos. E. McDermott; Ernest G. Epler; Wm. H. Weaver; C. M. Coe; Hugh Menzies.

In case any vacancies should occur, the following alternates will have an opportunity to serve. The list is arranged also in the order of merit:

H. M. Hall; Herman E. Burbank; Miss Fannie Dickinson; Miss Isabella White, Frank P. Peck—equal rank.

The advantages presented by this hospital for clinical experience in all departments are so great that those who gain the opportunity to serve as house officers are to be congratulated.

THE next annual meeting of the Association of American Medical Editors will be held in the city of Cleveland, Ohio, simultaneously with that of the American Medical Association, on June 5 and 6, 1883. The following will be the order of exercises:

Tuesday, June 5, 7:15 P.M.—Roll called; reading minutes of previous meeting; President's address and discussion thereon; reports of committees; deferred business; new business; election of members; adjournment.

Wednesday, June 6, 7:15 P. M.—Roll called; reading minutes of previous meeting; address by Dr. Henry O. Marcy, of Boston; reading of special papers by Dr. John A. Ochterlony, of Louisville, Ky., and Dr. Alexander J. Stone, of St. Paul, Minn.; discussion of addresses and papers; reports of committees; deferred business; new business; election of officers and members; adjournment.

The subject of the address to be delivered by the President, Dr. N. S. Davis, of Chicago, is "The Present Status and Tendencies of the Medical Profession and Medical Journalism." A free discussion upon this important subject is invited, which will be open, not only to members, but to all physicians present. Dr. Marcy's address will be upon the subject of "Journalism devoted

to the Protection and Concentration of Medical and Surgical Science in Special Departments."

The Secretary was authorized at the last meeting of the Association, held at St. Paul, Minn., to make the above arrangements for the coming meeting, and also to specially invite all the members of the profession, and friends attending the meeting of the American Medical Association, to be present. The meetings will be held in the interval between the meetings of the sections of the American Medical Association, and the social entertainments of the evening. The sessions will be short, and undoubtedly interesting.

COLLEGE OF PHYSICIANS AND SURGEONS.—At the Faculty meeting, March 17, 1883, the following chairs were declared vacant:

Practice of Medicine, occupied by Dr. Carpenter; Surgical Anatomy, occupied by Dr. French; Genito-Urinary Diseases, occupied by Dr. Ielks. At the same meeting the following appointments were made:

Practice of Medicine, Dr. F. L. Wadsworth; Genito-Urinary Diseases, Dr. E. W. Sawyer; Medical Chemistry, Dr. Harrison; Surgical Anatomy, vacant.

Dr. Power resigned the position of Demonstrator of Anatomy.

Dr. Wadsworth has not yet accepted.

THE quarterly meeting of the Illinois State Board of Health will be held in Chicago, April 12, at the Grand Pacific Hotel. At this meeting the annual examination of non-graduates will take place.

DR. S. W. SLEATER, a prominent physician of Charlotte, Michigan, died of congestion of the brain March 18.

THERE are 30 students in attendance at the Woman's Medical College for the spring session.

THERE are 200 students in attendance at the spring session of Rush Medical College.

CLINICS.

MONDAY.

Eye and Ear Infirmary—1.15 to 2.15 p. m., Otological, by Dr. Schaefer; 2.15 to 3.30 p. m., Ophthalmological, Dr. Holmes.
Mercy Hospital—2 p. m., Medical, Profs. Hollister and Quine.
Rush Medical College—2 p. m., Medical by Prof. Bridge; 3 p. m., Dermatological and Venereal, by Prof. Hyde.
Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard.

TUESDAY.

Cook Co. Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.
Woman's Medical College—10 a. m., Prof. Ingals.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—3 p. m., Ophthalmological and Otological, by Prof. Holmes; 3 to 4 p. m., Diseases of the Chest, by Prof. Ross.
Woman's Medical College—2 p. m., Eye and Ear, by Dr. W. T. Montgomery; 3 p. m., Diseases of Children, by Prof. Chas. W. Earle.
Eye and Ear Infirmary—2.30 p. m., Dr. E. J. Gardiner.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, Prof. Dudley.
Rush Medical College—2 p. m., Diseases of Children, by Prof. Knox; 3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—1.15 to 2.25 p. m., Otological, by Dr. Schaefer; 2.15 to 3.30 p. m., Ophthalmological, Dr. Holmes.
Woman's Medical College—3 p. m., Surgical, by Prof. Owens.
College of Physicians and Surgeons—2 p. m., Medical, by Prof. S. A. McWilliams; 3 p. m., Surgical, by Prof. R. L. Rea.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.
Chicago Medical College—3 p. m., Neurological, Prof. Jewell.
Woman's Medical College—2 p. m., Gynæcological, by Prof. T. D. Fitch.
College of Physicians and Surgeons—2 p. m., Diseases of the Chest, by Prof. S. A. McWilliams; 3 p. m., Gynæcological, by Prof. A. Reeves Jackson.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, at the South Side Dispensary and at the West Side Dispensary.